

PETROLEUM
INDEPENDENT

September 1989



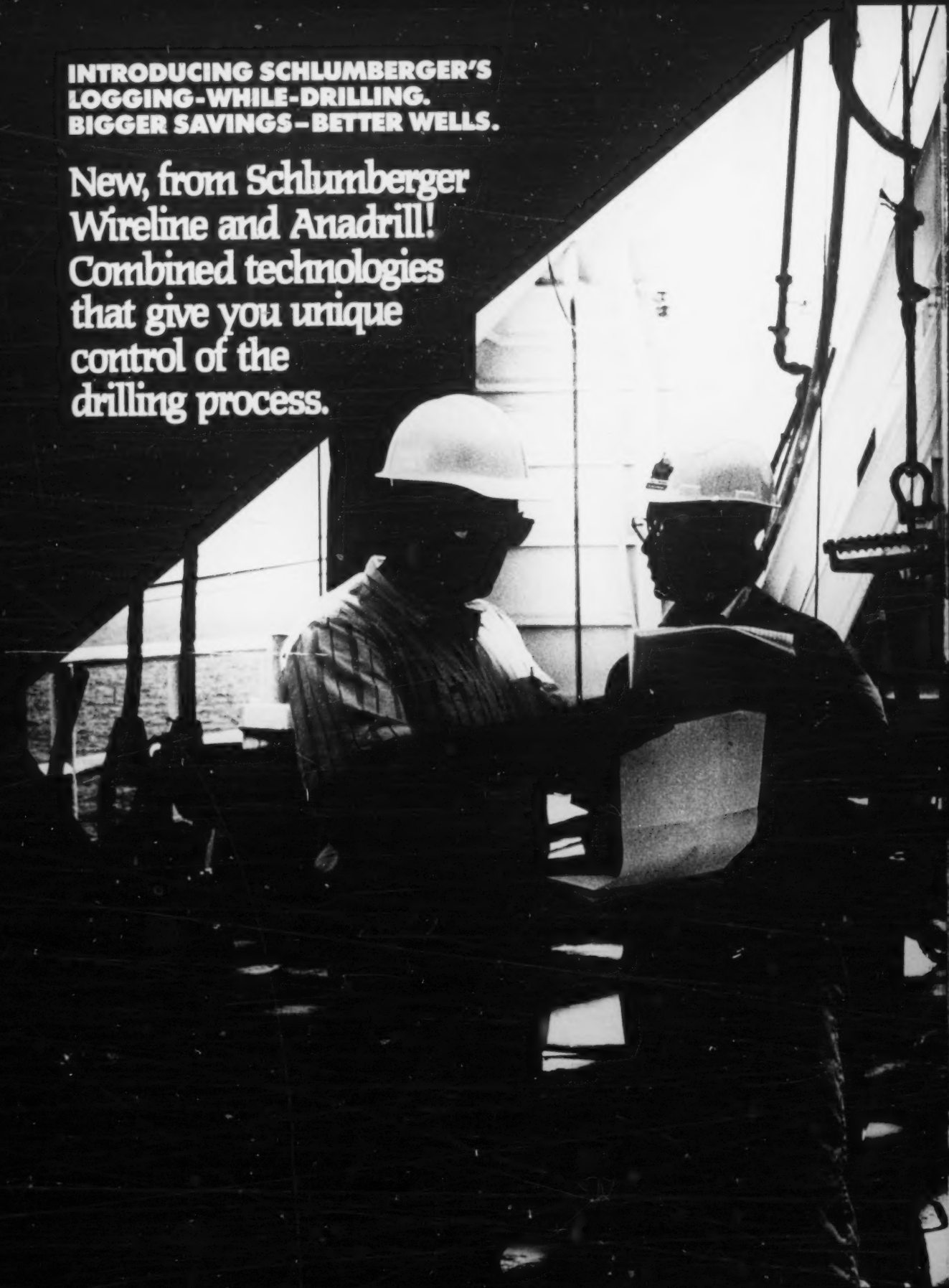
***The Oil & Natural Gas
Producing Industry
in Your State***

1989-1990



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Chairman's Page

IPAA's annual publication of *The Oil & Natural Gas Producing Industry in Your State* is more than a tradition. As anticipated, it is a desktop reference tool used by thousands, every day of the year.

And this issue is no exception.

In fact, considering all of the changes that have taken place in the oil and natural gas exploration/producing industry in the last year, this could be the most useful such publication so far. More than numbers, these pages tell the story of what's going on and how those events will affect the domestic exploration and production industry. Explorer/producers, analysts, policy makers — indeed anyone needing petroleum industry data, can depend on the careful analyses and interpretations made by IPAA's Department of Petroleum Information Services.

This publication is as unique as the industry it serves. It is the only publication that compiles comprehensive statistics from myriad sources according to exact standards on a state-by-state basis. Readers can tell at a glance the status and trends of the industry in a specific locale.

As with all of IPAA's departments and services, the primary goal of the Petroleum Information Services Department is to serve IPAA's members, the independent oil and natural gas explorer and producer and all those who make policy and business decisions about the industry. Because most of us don't have an in-house economics specialist to compile the many industry figures we need, IPAA is there for us — gathering data, compiling statistics, interpreting the trends.



The charts, graphs, illustrations and statistics throughout this issue, prepared by the Petroleum Information Services Department, vividly illustrate the situation in the oil patch: Domestic petroleum production continues to decline significantly, overshadowing natural gas' increased production since 1986.

The central problem remains: wellhead prices and profits from either crude oil or natural gas are so low and erratic that planning is difficult and projects economical to develop are becoming very difficult to find.

IPAA is the members, and the staff is there to serve the good of the industry. This issue of *The Oil & Natural Gas Producing Industry in Your State* is but one example of the many services you receive as an IPAA member. And we are working every day to be even more member responsive.

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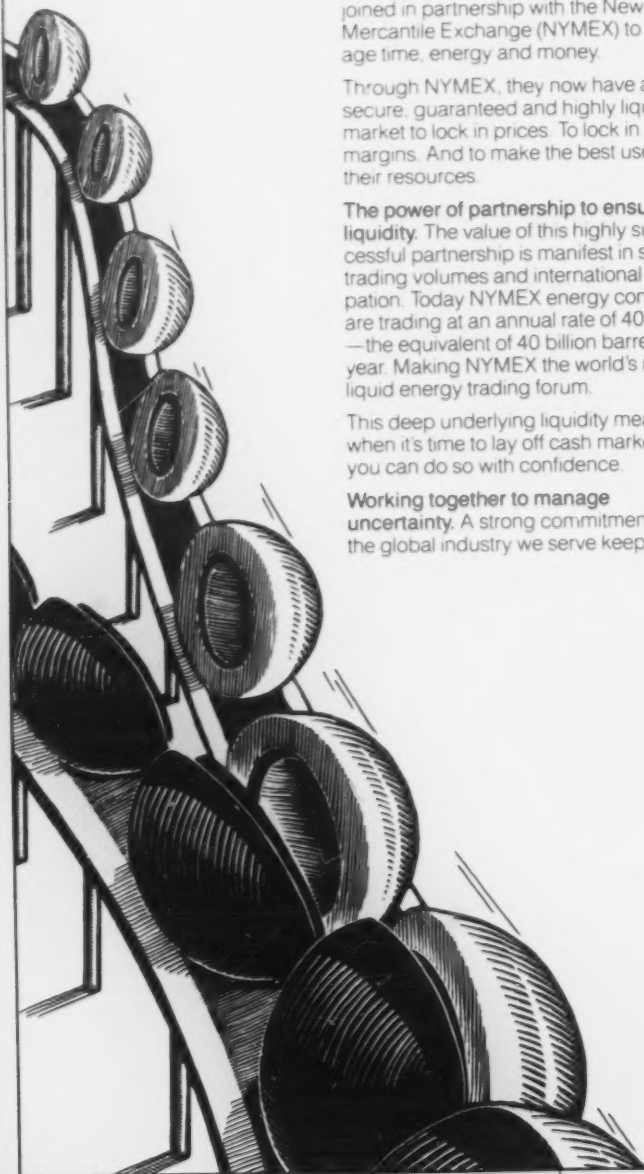
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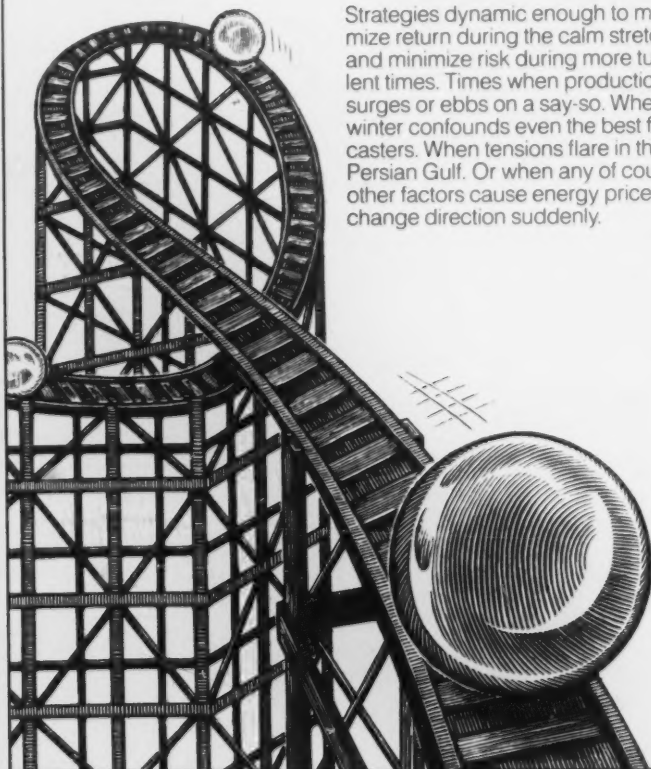
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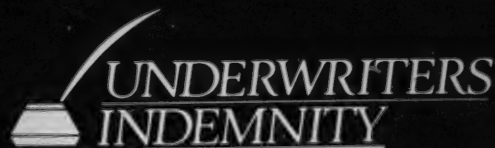
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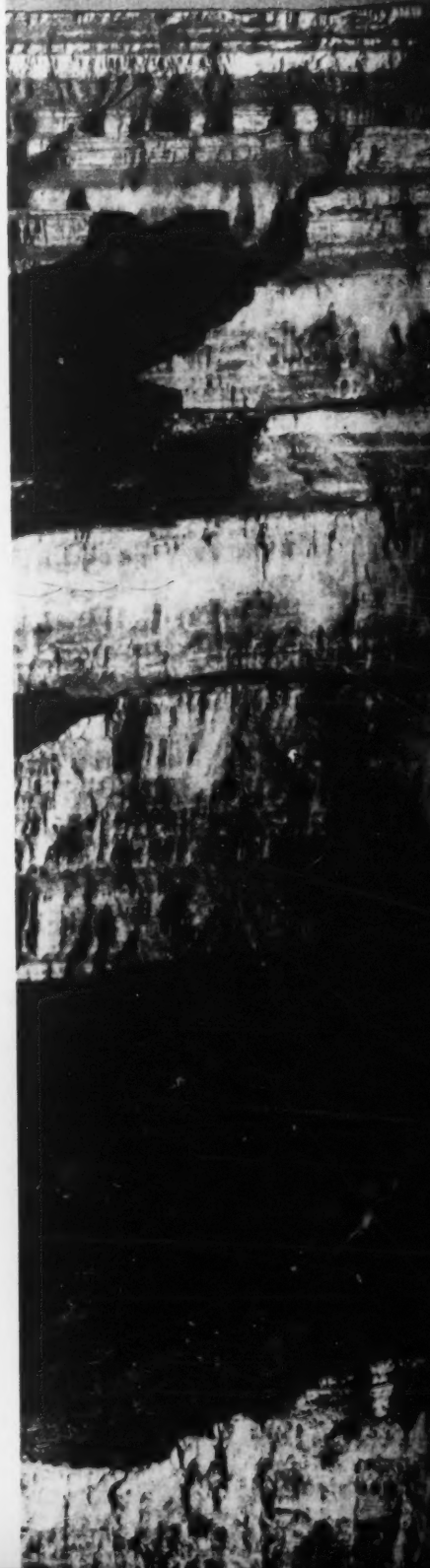
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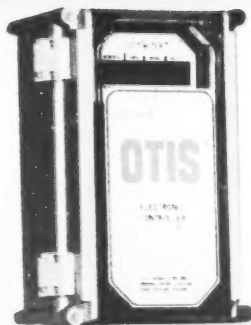
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The Year In Review

As the Independent Petroleum Association of America celebrates its 60th anniversary this year, the health of the U.S. petroleum market continues to be determined primarily by the actions of the Organization of Petroleum Exporting Countries (OPEC). Most members of OPEC exceeded their production quotas during 1988, which had a depressing effect on prices. The industry turnaround that everyone had long awaited did not materialize in 1988.

Although average U.S. wellhead crude oil prices rose during the first part of 1988 to more than \$14.00 per barrel, they dropped significantly during the latter part of the year, reaching as low as \$10.30 per barrel in November. The 1988 annual average of \$12.57 per barrel was 18 percent below the 1987 price level of \$15.40.

Natural gas wellhead prices rose slightly in 1988 to an average of \$1.71 per thousand cubic feet (Mcf). However, natural gas prices have dropped more than a third since their peak in 1984 at \$2.06 per Mcf.

During 1989, prices have strengthened as OPEC production remains more in line with quota limits. However, such positive trends in recent monthly data are not reflected in this publication, which is limited in scope to 1988 annual averages.

Concern about a long-term collapse in oil prices caused drilling activity to languish last year. After declining for three consecutive years, the U.S. rotary rig count remained flat in 1988 at 936 rigs. This was the same level as in 1987, which proved to be the lowest annual average in history. The rotary rig count still is less than half the average for 1985, when there were 1,980 rigs active for the year.

The seismic crew count, one of the main indicators of future exploration activity, climbed more than 8 percent in 1988. There were 1,692 land and marine crew-months worked during the year. This compares to nearly 3,500 crew-months just three years earlier before the collapse in crude oil prices.

The latest available drilling estimates (as of publication date) indicate that there were only 30,071 total well completions in 1988. This is less than half the level of 1985, and the worst drilling year since 1973. U.S. drilling began to fall after 1981, when annual completions peaked at 91,600 wells.

A continuing decline in exploration and drilling activity resulted in a third consecutive year of reduced U.S. crude oil production in 1988. The annual average of 8.1 million barrels per day (MM b/d) is the lowest level since 1976, the year before

production began at Alaska's Prudhoe Bay. By the end of 1988, production had fallen by 1.2 MM b/d since early 1986, using monthly output levels.

Production in the lower 48 states already has dropped to levels not experienced since the early 1950s. The decline is expected to continue until drilling increases to at least 80,000 wells per year.

In contrast to crude oil, natural gas marketed production increased somewhat in 1988, to an average of nearly 17.5 trillion cubic feet (Tcf), up from 17.3 Tcf in 1987. Regulatory constraints and deliverability factors continue to be problems for the natural gas industry.

There were 612,448 crude oil wells producing at the end of 1988, or 7,733 fewer wells than the year before. By contrast, the number of producing natural gas wells continued to increase, setting a new record of 256,004 wells. However, the rate of growth has slowed dramatically from the nearly 9 percent gain made in 1985.

The amount of severance and production taxes paid by the domestic petroleum industry has dropped steadily since 1982. The total of more than \$3.6 billion in state and local receipts was 27 percent less than during 1986. From the time that IPAA began surveying this data more than 20 years ago, severance tax revenues increased steadily until the peak of more than \$7.1 billion in 1982.Δ

—Deborah Rowell

Seismic Crews Working

Rotary Rigs Active

Total Wells Drilled

Producing Wells

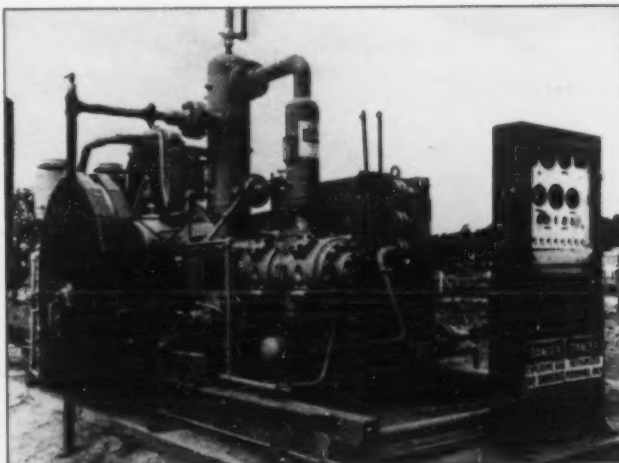
Texas	+ 0.1%	-13.0%	+ 3.0%	+ 23.0%
Alaska	+ 8.6%	+41.0%	+20.0%	+340.0%
Louisiana	-2.0%	-15.0%	+21.0%	-13.0%
California	+ 0.2%	-24.0%	-2.0%	-24.0%
Oklahoma	-3.0%	-19.0%	-7.0%	+ 90.0%
Wyoming	+ 7.0%	-12.0%	-8.0%	+ 53.0%
New Mexico	-0.0%	-11.0%	+ 6.0%	+ 45.0%
Kansas	+1.0%	-12.0%	-10.0%	+126.0%
TOTAL U.S.	+ 3.6%	-14.0%	-7.0%	+ 5.0%

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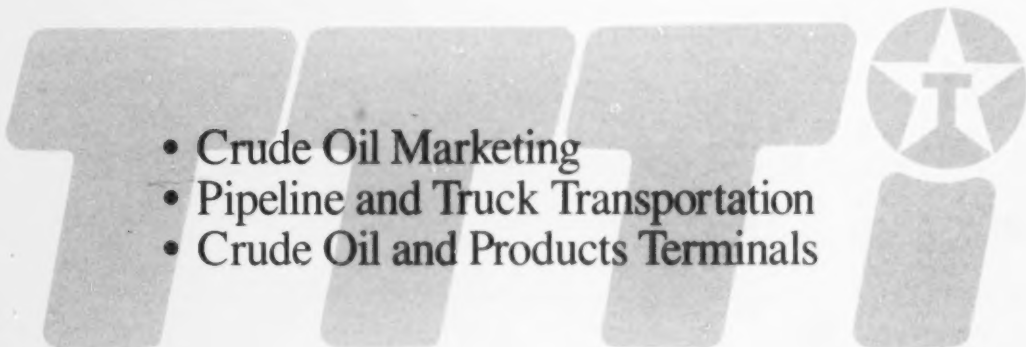
Statistical Summary

	PRODUCTION			IMPORTS			OTHER SUPPLY	TOTAL SUPPLY	TOTAL DEMAND	CRUDE RESERVES		CRUDE OIL PRICE
	Crude Oil	NGL	Total	Crude Oil	Refined Products	Total				Proved Reserves	New Reserves	
					(thous. b/d)							
1947	5,087	362	5,449	267	170	437	107	5,993	5,938	21,488	2,465	1.93
1948	5,520	401	5,921	353	161	514	93	6,528	6,166	23,280	3,795	2.60
1949	5,046	430	5,476	421	224	645	46	6,167	6,136	24,649	3,188	2.54
1950	5,407	499	5,906	487	363	850	100	6,856	6,861	25,268	2,563	2.51
1951	6,158	561	6,719	491	353	844	57	7,620	7,487	27,468	4,414	2.53
1952	6,256	611	6,867	573	379	952	28	7,847	7,712	27,961	2,749	2.53
1953	6,458	654	7,112	648	386	1,034	30	8,176	8,010	28,945	3,296	2.68
1954	6,342	691	7,033	656	396	1,052	32	8,117	8,119	29,561	2,873	2.78
1955	6,807	771	7,578	782	466	1,248	44	8,870	8,832	30,012	2,871	2.77
1956	7,151	800	7,951	934	502	1,436	52	9,439	9,213	30,435	2,974	2.79
1957	7,170	808	7,978	1,022	552	1,574	61	9,613	9,395	30,300	2,425	3.09
1958	6,710	807	7,517	953	747	1,700	65	9,282	9,394	30,536	2,608	3.01
1959	7,054	879	7,933	966	814	1,780	86	9,799	9,737	31,719	3,667	2.90
1960	7,035	929	7,964	1,016	799	1,815	147	9,926	10,000	31,613	2,365	2.88
1961	7,183	991	8,174	1,045	872	1,917	179	10,270	10,150	31,759	2,658	2.89
1962	7,332	1,021	8,353	1,127	955	2,082	175	10,610	10,568	31,389	2,181	2.90
1963	7,542	1,098	8,640	1,131	992	2,123	202	10,965	10,951	30,970	2,174	2.89
1964	7,614	1,155	8,769	1,198	1,060	2,258	217	11,244	11,225	30,991	2,665	2.88
1965	7,804	1,210	9,014	1,239	1,229	2,468	220	11,702	11,700	31,352	3,048	2.86
1966	8,295	1,284	9,579	1,225	1,348	2,573	246	12,398	12,283	31,452	2,964	2.88
1967	8,810	1,409	10,219	1,128	1,409	2,537	293	13,049	12,867	31,377	2,962	2.92
1968	9,096	1,504	10,600	1,291	1,549	2,840	347	13,787	13,624	30,707	2,455	2.94
1969	9,238	1,590	10,828	1,409	1,757	3,166	339	14,333	14,370	29,632	2,120	3.09
1970	9,637	1,660	11,297	1,324	2,095	3,419	355	15,071	14,956	39,001	2,689	3.18
1971	9,463	1,694	11,157	1,680	2,245	3,925	438	15,520	15,437	38,063	2,318	3.39
1972	9,441	1,744	11,185	2,216	2,525	4,741	431	16,357	16,589	36,339	1,558	3.39
1973	9,208	1,738	10,946	3,244	3,012	6,256	472	17,674	17,539	35,300	2,146	3.89
1974	8,774	1,688	10,462	3,477	2,635	6,112	478	17,052	16,873	34,250	1,994	6.87
1975	8,375	1,632	10,007	4,105	1,951	6,056	631	16,694	16,531	32,682	1,318	7.67
1976	8,132	1,604	9,736	5,287	2,026	7,313	577	17,626	17,684	30,942	1,085	8.19
1977	8,245	1,618	9,863	6,594	2,193	8,787	552	19,202	18,674	31,780	1,140	8.57
1978	8,707	1,567	10,274	6,194	2,008	8,202	476	18,952	19,209	31,355	2,583	9.00
1979	8,552	1,583	10,135	6,452	1,937	8,389	570	19,094	18,987	29,810	1,410	12.64
1980	8,597	1,573	10,170	5,219	1,646	6,865	660	17,695	17,600	29,805	2,970	21.59
1981	8,572	1,609	10,181	4,141	1,599	5,740	646	16,567	16,653	29,426	2,570	31.77
1982	8,649	1,550	10,199	3,323	1,625	4,948	643	15,790	16,111	27,858	1,382	28.52
1983	8,688	1,559	10,247	3,096	1,721	4,817	737	15,801	15,970	27,735	2,897	26.19
1984	8,879	1,630	10,509	3,229	2,011	5,240	784	16,533	16,448	28,446	3,748	25.88
1985	8,971	1,609	10,580	3,083	1,866	4,949	758	16,287	16,507	28,416	3,022	24.09
1986	8,680	1,551	10,231	4,130	2,046	6,176	811	17,218	17,066	26,889	1,446	12.51
1987	8,349	1,595	9,944	4,601	2,004	6,605	841	17,390	17,429	27,256	3,240	15.40
1988	8,140	1,625	9,765	5,056	2,295	7,351	902	18,018	18,098	N/A	N/A	12.57

Sources: Energy Information Administration
and American Petroleum Institute

Notes: Imports to Strategic Petroleum Reserve are excluded.
Other supply includes refinery processing gain, unaccounted
crude oil, and other hydrocarbons.
Reserves estimated as of December 31st each year.

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Columbia and Jackson, MS

Statistical Summary—continued

	NATURAL GAS		GAS RESERVES		NATURAL GAS PRICE	WELL COMPLETIONS					TOTAL FOOTAGE DRILLED
	Marketed Production	Gas Imports	Proved Reserves	New Reserves		Oil Wells	Gas Wells	Dry Holes	Service Wells	Total Wells	
	(Bcf)				(\$/Mcf)	(number of wells)					(mil. ft.)
1947	4,582	N/A	165,927	10,981	0.06	17,999	3,305	9,538	2,280	33,122	114.1
1948	5,148	N/A	173,869	13,950	0.07	22,585	2,897	12,026	2,270	39,778	137.4
1949	5,420	N/A	180,381	12,757	0.06	22,042	2,887	12,727	1,382	39,038	138.0
1950	6,282	N/A	185,593	12,104	0.07	24,430	2,843	14,757	1,249	43,279	159.3
1951	7,457	N/A	193,812	16,186	0.07	23,453	3,030	16,653	1,380	44,516	172.3
1952	8,013	8	199,716	14,544	0.08	23,466	3,255	17,618	1,482	45,821	187.2
1953	8,397	9	211,447	20,969	0.09	25,762	3,806	18,449	1,262	49,279	198.8
1954	8,743	7	211,711	9,690	0.10	29,773	3,974	19,168	1,012	53,927	219.0
1955	9,405	11	223,697	22,105	0.10	31,567	3,608	20,742	760	56,677	226.3
1956	10,082	10	237,775	24,985	0.11	30,737	4,543	21,797	1,049	58,126	233.9
1957	10,680	38	246,569	20,297	0.11	28,012	4,620	20,976	230	53,838	223.1
1958	11,030	136	254,142	19,058	0.12	24,578	4,803	19,043	1,615	50,039	198.2
1959	12,046	134	262,597	20,895	0.13	25,800	5,029	19,265	1,670	51,764	209.2
1960	12,771	156	263,759	14,253	0.14	21,186	5,258	17,574	2,733	46,751	190.7
1961	13,254	219	267,728	17,421	0.15	21,101	5,664	17,106	3,091	46,962	192.1
1962	13,877	402	273,766	19,750	0.16	21,249	5,848	16,682	2,400	46,179	198.6
1963	14,747	406	276,151	18,418	0.16	20,288	4,751	16,347	2,267	43,653	184.4
1964	15,547	443	281,251	20,447	0.15	20,620	4,855	17,488	2,273	45,236	189.9
1965	16,040	456	286,469	21,470	0.16	18,761	4,724	16,025	1,913	41,423	181.5
1966	17,207	480	289,333	20,355	0.16	16,447	4,167	15,770	2,152	38,536	165.5
1967	18,171	564	292,908	21,956	0.16	15,329	3,659	13,246	1,584	33,818	144.7
1968	19,322	652	287,350	13,816	0.16	14,331	3,456	12,812	2,315	32,914	149.3
1969	20,698	727	275,109	8,482	0.17	14,368	4,083	13,736	1,866	34,053	161.0
1970	21,921	821	290,746	37,598	0.17	13,043	4,031	11,099	1,369	29,542	142.0
1971	22,493	935	278,806	10,136	0.18	11,903	3,983	10,382	1,414	27,682	130.7
1972	22,532	1,019	266,085	9,791	0.19	11,437	5,484	11,013	1,486	29,420	142.5
1973	22,648	1,033	249,950	6,471	0.22	10,251	6,975	10,466	970	28,662	141.9
1974	21,601	959	237,132	8,501	0.30	13,644	7,168	12,205	1,398	34,415	156.7
1975	20,109	953	228,200	10,786	0.45	16,979	8,169	13,736	1,920	40,804	184.9
1976	19,952	964	216,026	7,368	0.58	17,697	9,438	13,805	1,674	42,614	190.9
1977	20,025	1,011	207,413	12,978	0.79	18,700	12,119	15,036	1,453	47,308	219.6
1978	19,974	966	208,033	19,425	0.91	19,065	14,405	16,591	1,610	51,671	242.5
1979	20,471	1,253	200,997	12,221	1.18	20,689	15,166	16,035	1,472	53,362	247.4
1980	20,180	985	199,021	16,723	1.59	32,120	17,132	20,234	2,076	71,562	316.4
1981	19,956	904	201,730	21,446	1.98	42,520	19,742	26,972	2,366	91,600	412.3
1982	18,520	933	201,512	17,288	2.46	38,388	18,584	25,545	2,212	84,729	377.6
1983	16,822	920	200,247	14,523	2.59	38,379	12,770	23,854	2,047	77,050	318.7
1984	18,230	843	197,463	14,409	2.66	43,967	14,943	25,251	2,251	86,412	370.8
1985	17,198	949	193,369	11,891	2.51	36,145	12,690	21,079	1,736	71,650	315.4
1986	16,791	750	191,586	13,827	1.94	18,388	8,008	12,250	834	39,480	179.1
1987	17,349	992	187,211	11,739	1.67	15,660	7,556	10,850	866	34,932	160.4
1988	17,457	1,283	N/A	N/A	1.71	12,256	7,471	9,454	890	30,071	147.6

Sources: Drilling data from American Petroleum Institute and American Association of Petroleum Geologists. Reserves from American Gas Association and Energy Information Administration. All other data from Energy Information Administration.

Notes: Drilling data include exploratory and development wells. Reserves estimated as of December 31st each year.

Reference Data

Abbreviations

bbl. = barrel
b/d = barrels per day
Mcf = thousand cubic feet
MMcf = million cubic feet
Bcf = billion cubic feet
Tcf = trillion cubic feet
BTU = British Thermal Unit
NGL = Natural Gas Liquids
LPG = Liquefied Petroleum Gases
EIA = Energy Information Administration
API = American Petroleum Institute
N/A = Data Not Available

Energy Conversions

One barrel of crude oil:

= 42 gallons
= 5,800,000 BTU of energy
= 5,614 cubic feet of natural gas
= 0.22 ton of bituminous coal

One cubic foot of natural gas:

= 7.48 gallons
= 1,032 BTU of energy
= 0.000178 barrel of crude oil
= 0.00004 ton of bituminous coal

One short ton of bituminous coal:

= 2,00 pounds
= 26,200,000 BTU of energy
= 4.52 barrels of crude oil
= 25,314 cubic feet of natural gas

One metric ton of crude oil:

= 2,204 pounds
= 7.46 barrels of domestic crude oil
= 6.99 barrels of foreign crude oil

One cubic meter of natural gas:

= 35.314 cubic feet

IPAA Calendar of Events

1989
October 29-31

Annual Meeting
Marriott Rivercenter
San Antonio, TX

1990
May 9-12

Midyear Meeting
Marriott Copley Place
Boston, MA

1990
October 21-23

Annual Meeting
Loews Anatole
Dallas, TX

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UNITED STATES



■ States with oil and/or gas production

Background Information

Number of States	50	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)			
With oil and/or gas production	33	Oil wells	1,752,648	57%	
First year of production:		Gas wells	380,573	12%	
Crude oil	1859	Dry holes	946,402	31%	
Natural gas	1881	Total	3,079,623	100%	
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)			
Crude oil — 3,517,450 thous. bbls.	1970	\$1,139,616,689			
Natural gas — 22,647,549 MMcf	1973	Cumulative production & new reserves as of 12/31/87: (latest available data)			
Deepest producing well: (ft.)		Crude oil	NGL	Total	Natural gas (Bcf)
Crude oil	18,060		(mill. bbls.)		
Natural gas	26,536	Reserves	172,508	32,533	205,041
Year and depth of deepest well drilled: (ft.)		Production	145,619	24,368	169,987
1974	31,441				903,308
					702,199

Value of Oil and Gas

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$12.57	Residential consumers	\$5.46
Natural gas (\$/Mcf)	\$1.71	Commercial consumers	\$4.63
Wellhead value of 1988 production: (thous. \$)		Industrial consumers	\$2.96
Crude oil	\$37,447,576	Electric utilities	\$2.34
Natural gas	\$29,851,280	All consumers	\$4.10
Total	\$67,298,856	Severance taxes paid in 1988 (thous. \$)	\$

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	790	11,466	12,256
Gas	637	6,834	7,471
Dry	4,582	4,872	9,454
Service	--	890	890
Total	6,009	24,062	30,071

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	4,826.6	49,162.7	53,989.3
Gas	4,318.0	35,900.2	40,218.1
Dry	26,651.5	23,955.1	50,606.6
Service	--	2,805.8	2,805.8
Total	35,796.0	111,823.8	147,619.8

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 3,153
 New-field wildcat footage (thous. ft.) 20,260.2

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	--	--
Production	--	--
Reserves (1987)	--	--

Seismic crew months worked 1,692
 Average rotary rigs active 936

Number of producing wells: (12/31/88)

Crude oil	612,448
Flowing	32,497
Artificial lift	579,951
Natural gas	256,004
Total	868,452

Average production:	thous. bbls.	thous. b/d
Crude oil	2,979,123	8,140
NGL	595,000	1,630
Total	3,574,123	9,770

Natural gas marketed production (MMcf) 17,456,889
 Average output per producing well:

Crude oil (bbls.)	4,864
Natural gas (Mcf)	68,189

Average number of employees in:

Oil and gas extraction	401,749
Refining	133,553
Transportation	178,216
Wholesale	201,957
Retail	622,799
Total petroleum industry	1,538,274

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	3,240	729	3,969
Production	2,873	747	3,620
Net annual change	367	-18	349
Proved reserves	27,256	8,147	35,403

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	1,963	10,260	12,223
Production	3,351	13,553	16,904
Net annual change	-1,388	-3,293	-4,681
Proved reserves	58,189	138,239	196,428

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	3,769,430	245,950	58.35
Gas	2,759,470	380,354	69.54
Dry	2,709,850	259,068	51.04
Total	9,238,749	279,615	58.71

Number of producing stripper wells 451,787
 Number of stripper well abandonments 18,241

Stripper well crude oil production:

(bbls.)	446,836,761
(b/d)	1,224,210
Percentage of oil produced by stripper wells	24%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	2,169,173
Secondary	1,774,912
Total	3,944,085

Percentage of total value of principal mineral production:

Crude oil — ranked 1st	44%
Natural gas — ranked 2nd	32%

National Energy Contact

Energy Information Administration
 Forrestal Building, Room 1F-048
 1000 Independence Avenue, S.W.
 Washington, D.C. 20585
 (202) 586-5000

ALABAMA



■ Counties with oil and/or gas production

Background Information

Number of counties 67
With oil and/or gas production 16

First year of production:

Crude oil 1944
Natural gas 1904

Year and amount of peak production:

Crude oil — 22,153 thous. bbls. 1980
Natural gas — 129,523 MMcf (est.) 1988

Deepest producing well: (ft.)

Crude oil 18,750
Natural gas 21,650

Year and depth of deepest well drilled: (ft.)

1984 21,784

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	1,007	19%
Gas wells	1,350	26%
Dry holes	2,885	55%
Total	5,242	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) \$6,129,316

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	339	334	673	1,833
Production	284	168	452	944

Value of Oil and Gas

Average 1988 wellhead price:

Crude oil (\$/bbl.) \$13.85
Natural gas (\$/Mcf) \$2.85

Wellhead value of 1988 production: (thous. \$)

Crude oil \$288,038
Natural gas \$369,141
Total \$657,179

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers \$6.49
Commercial consumers \$5.15
Industrial consumers \$2.96
Electric utilities \$2.13
All consumers \$4.49

Severance taxes paid in 1988 (thous. \$) \$47,965

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	6	18	24
Gas	20	150	170
Dry	73	51	124
Service	--	0	0
Total	99	219	318

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	85.8	150.1	235.9
Gas	105.3	374.8	480.0
Dry	575.7	202.1	777.8
Service	--	0.0	0.0
Total	766.8	727.0	1,493.8

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	85
New-field wildcat footage (thous. ft.)	698.5

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	23rd	12th
Production	16th	16th
Reserves (1987)	15th	18th

Seismic crew months worked	23
Average rotary rigs active	12

Number of producing wells: (12/31/88)

Crude oil	892
Flowing	91
Artificial lift	801
Natural gas	1,190
Total	2,082

Average production:	thous. bbls.	thous. b/d
Crude oil	20,797	57
NGL	11,000	30
Total	31,797	87

Natural gas marketed production (MMcf) 129,523

Average output per producing well:

Crude oil (bbls.)	23,315
Natural gas (Mcf)	108,842

Average number of employees in:

Oil and gas extraction	1,489
Refining	517
Transportation	3,282
Wholesale	5,483
Retail	8,224
Total petroleum industry	18,995

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	11	3	14
Production	11	14	25
Net annual change	0	-11	-11
Proved reserves	55	166	221

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	-11	4	-7
Production	8	97	105
Net annual change	-19	-93	112
Proved reserves	29	860	889

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	9,167	352,559	50.81
Gas	37,552	695,401	134.24
Dry	28,269	264,196	40.62
Total	74,987	401,001	64.86

Number of producing stripper wells	122
Number of stripper well abandonments	7

Stripper well crude oil production:

(bbls.)	193,337
(b/d)	529
Percentage of oil produced by stripper wells	2%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	417
Secondary	21
Total	438

Percentage of total value of principal mineral production:

Crude oil — ranked 3rd	16%
Natural gas — ranked 2nd	16%

State Energy Contact

Alabama State Oil and Gas Board
P.O. Box O
Tuscaloosa, AL 35486
(205) 349-2852

ALASKA



Background Information

Number of counties Not Applicable
 With oil and/or gas production Not Applicable

First year of production:
 Crude oil 1905
 Natural gas 1945

Year and amount of peak production:
 Crude oil — 738,143 thous. bbls. 1988
 Natural gas — 392,204 MMcf 1988

Deepest producing well: (ft.)
 Crude oil 14,952
 Natural gas 16,073

Year and depth of deepest well drilled: (ft.)
 1975 20,335

Cumulative number of total wells drilled as of 12/31/88:
 (excluding service wells)

Oil wells	1,912	74%
Gas wells	127	5%
Dry holes	536	21%
Total	2,575	100%

Cumulative crude oil wellhead value as of 12/31/88:
 (thous. \$) \$96,299,857

Cumulative production & new reserves as of 12/31/87:
 (latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	14,421	450	14,871	37,933
Production	7,043	32	7,075	4,218

Value of Oil and Gas

Average 1988 wellhead price:
 Crude oil (\$/bbl.) \$8.52
 Natural gas (\$/Mcf) \$1.16

Wellhead value of 1988 production: (thous. \$)
 Crude oil \$6,288,978
 Natural gas \$454,957
Total \$6,743,935

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$3.48
Commercial consumers	\$2.71
Industrial consumers	\$1.08
Electric utilities	N/A
All consumers	\$1.93

Severance taxes paid in 1988 (thous. \$) \$815,810

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	0	120	120
Gas	2	1	3
Dry	1	3	4
Service	--	6	6
Total	3	130	133

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	0.0	1,226.6	1,226.6
Gas	19.1	2.3	21.4
Dry	15.1	31.0	46.1
Service	--	70.4	70.4
Total	34.2	1,330.3	1,364.5

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	3
New-field wildcat footage (thous. ft.)	34.2

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	13th	25th
Production	2nd	8th
Reserves (1987)	2nd	3rd

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	1,221	53	1,274
Production	718	16	734
Net annual change	503	37	540
Proved reserves	7,378	418	7,796

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	11	700	711
Production	172	179	351
Net annual change	-161	521	360
Proved reserves	30,732	2,983	33,715

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	287,710	2,196,261	214.32
Gas	3,418	1,139,442	279.27
Dry	6,218	1,243,523	188.24
Total	297,346	2,139,181	214.48

Seismic crew months worked	22
Average rotary rigs active	12

Number of producing wells: (12/31/88)

Crude oil	1,305
Flowing	654
Artificial lift	651
Natural gas	108
Total	1,413

Average production:	thous. bbls.	thous. b/d
Crude oil	738,143	2,017
NGL	13,000	36
Total	751,143	2,053

Natural gas marketed production (MMcf) 392,204

Average output per producing well:

Crude oil (bbls.)	565,626
Natural gas (Mcf)	3,631,518

Average number of employees in:

Oil and gas extraction	8,620
Refining	94
Transportation	1,155
Wholesale	566
Retail	1,036
Total petroleum industry	11,471

Number of producing stripper wells	0
Number of stripper well abandonments	0

Stripper well crude oil production:

(bbls.)	0
(b/d)	0

Percentage of oil produced by stripper wells 0

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	0
Secondary	0
Total	0

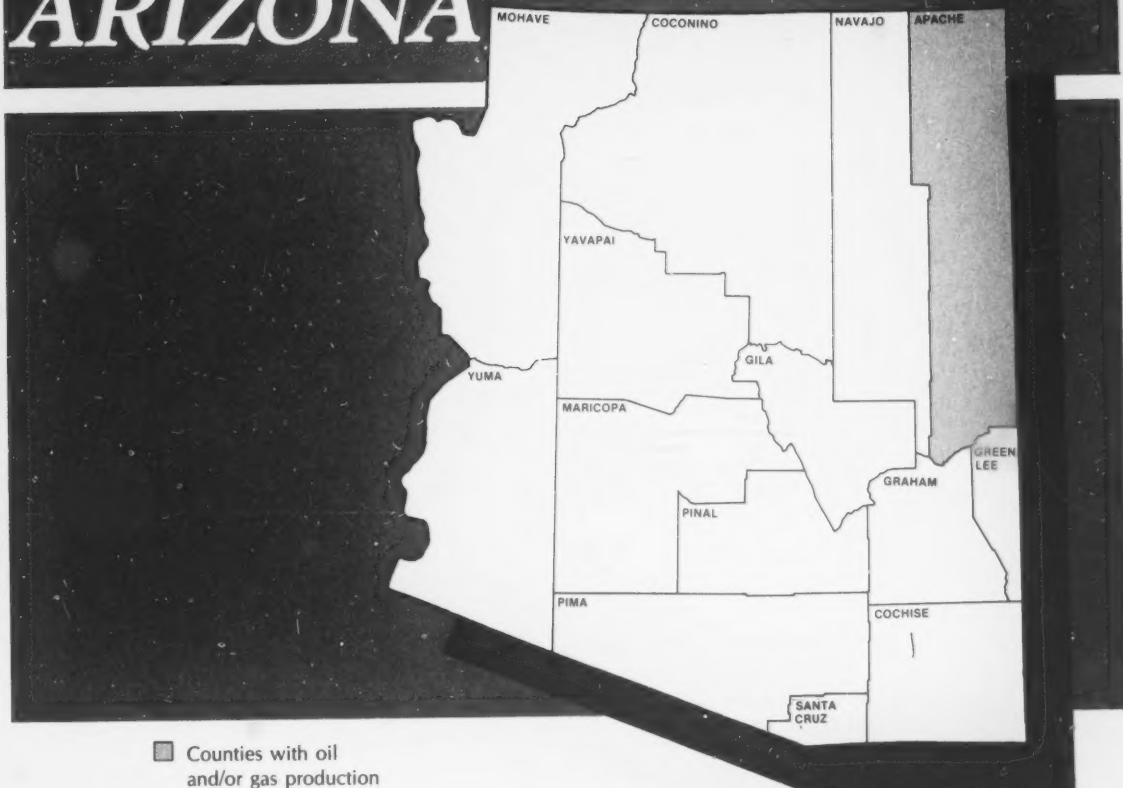
Percentage of total value of principal mineral production:

Crude oil — ranked 1st	94%
Natural gas — ranked 2nd	4%

State Energy Contact

Alaska Oil and Gas Conservation Committee
3001 Porcupine Drive
Anchorage, AK 99501
(907) 279-1433

ARIZONA



Background Information

Number of counties	14
With oil and/or gas production	1
First year of production:	
Crude oil	1954
Natural gas	1955
Year and amount of peak production:	
Crude oil — 3,370 thous. bbls.	1968
Natural gas — 3,161 MMcf	1966
Deepest producing well: (ft.)	
Crude oil	6,793
Natural gas	N/A
Year and depth of deepest well drilled: (ft.)	
1980.....	18,013

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	49	10%
Gas wells	35	7%
Dry holes	399	83%
Total	483	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$)

\$70,773,907

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	N/A	0	0	N/A
Production	N/A	0	0	N/A

Value of Oil and Gas

Average 1988 wellhead price:	
Crude oil (\$/bbl.)	\$14.57
Natural gas (\$/Mcf)	\$1.80
Weilhead value of 1988 production: (thous. \$)	
Crude oil	\$1,646
Natural gas	\$99
Total	\$1,745

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$7.01
Commercial consumers	\$4.86
Industrial consumers	\$3.78
Electric utilities	\$2.27
All consumers	\$4.74

Severance taxes paid in 1988

Not Applicable

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	0	0	0
Gas	0	0	0
Dry	1	0	1
Service	-	0	0
Total	1	0	1

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	0.0	0.0	0.0
Gas	0.0	0.0	0.0
Dry	4.0	0.0	4.0
Service	-	0.0	0.0
Total	4.0	0.0	4.0

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	1
New-field wildcat footage (thous. ft.)	4.0

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	-	-
Production	30th	30th
Reserves (1987)	N/A	N/A

Seismic crew months worked	0
Average rotary rigs active	0

Number of producing wells: (12/31/88)

Crude oil	20
Flowing	0
Artificial lift	20
Natural gas	N/A
Total	20

Average production:	thous. bbls.	thous. b/d
Crude oil	113	-
NGL	N/A	-
Total	113	-

Natural gas marketed production (MMcf)	55
Average output per producing well:	
Crude oil (bbls.)	5,650
Natural gas (Mcf)	N/A

Average number of employees in:

Oil and gas extraction	126
Refining	23
Transportation	1,961
Wholesale	1,391
Retail	8,881
Total petroleum industry	12,382

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	N/A	0	0
Production	N/A	0	0
Net annual change	N/A	0	0
Proved reserves	N/A	0	0

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	-	-	N/A
Production	-	-	N/A
Net annual change	-	-	N/A
Proved reserves	-	-	N/A

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	N/A	-	-
Gas	N/A	-	-
Dry	N/A	-	-
Total	N/A	-	-

Number of producing stripper wells	15
Number of stripper well abandonments	0

Stripper well crude oil production:

(bbls.)	30,097
(b/d)	82
Percentage of oil produced by stripper wells	23%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	116
Secondary	0
Total	116

Percentage of total value of principal mineral production:

Crude oil — ranked 10th	Less than 1%
Natural gas — ranked 13th	Less than 1%

State Energy Contact

Arizona Oil and Gas Conservation Commission
3110 North 19th Avenue
Suite 190
Phoenix, AZ 85015
(602) 255-5161

ARKANSAS



□ Counties with oil and/or gas production

Background Information

Number of counties	75
With oil and/or gas production	24

First year of production:

Crude oil	1921
Natural gas	1889

Year and amount of peak production:

Crude oil — 77,398 thous. bbls.....	1925
Natural gas — 181,351 MMcf	1970

Deepest producing well: (ft.)

Crude oil	12,128
Natural gas	11,195

Year and depth of deepest well drilled: (ft.)

1979.....	17,349
-----------	--------

Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)

Oil wells	17,859	52%
Gas wells.....	3,778	11%
Dry holes	12,975	37%
Total	34,612	100%

Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)

\$7,794,577

Cumulative production & new reserves as of 12/31/87: (latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	1,694	98	1,792	6,739
Production	1,612	82	1,694	4,561

Value of Oil and Gas

Average 1988 wellhead price:

Crude oil (\$/bbl.)	\$14.42
Natural gas (\$/Mcf)	\$1.40

Wellhead value of 1988 production: (thous. \$)

Crude oil	\$196,199
Natural gas	\$205,660
Total	\$401,859

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$4.83
Commercial consumers	\$4.36
Industrial consumers	\$3.10
Electric utilities	\$1.83
All consumers	\$3.78

Severance taxes paid in 1988 (thous. \$)

\$8,542

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	6	39	45
Gas	6	183	189
Dry	45	147	192
Service	- -	0	0
Total	57	369	426

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	26.7	192.8	219.5
Gas	13.1	767.4	780.4
Dry	175.3	625.0	800.3
Service	- -	0.0	0.0
Total	215.1	1,585.2	1,800.3

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 45
 New-field wildcat footage (thous. ft.) 153.8

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	20th	11th
Production	17th	14th
Reserves (1987)	14th	12th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	6	1	7
Production	12	1	13
Net annual change	6	0	6
Proved reserves	82	16	98

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	1	136	137
Production	6	124	130
Net annual change	7	160	167
Proved reserves	145	1,873	2,018

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	10,041	161,955	35.63
Gas	42,797	251,749	56.59
Dry	20,446	115,513	27.80
Total	73,284	179,179	41.33

Seismic crew months worked 7
 Average rotary rigs active 9

Number of producing wells: (12/31/88)

Crude oil	7,865
Flowing	150
Artificial lift	7,715
Natural gas	2,996
Total	10,861

Average production:	thous. bbls.	thous. b/d
Crude oil	13,606	37
NGL	1,000	3
Total	14,606	40

Natural gas marketed production (MMcf) 146,900

Average output per producing well:

Crude oil (bbls.)	1,730
Natural gas (Mcf)	49,032

Average number of employees in:

Oil and gas extraction	2,598
Refining	0
Transportation	2,185
Wholesale	2,805
Retail	5,549
Total petroleum industry	13,137

Number of producing stripper wells 4,438
 Number of stripper well abandonments 106

Stripper well crude oil production:

(bbls.)	4,888,175
(b/d)	13,392

Percentage of oil produced by stripper wells 34%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	75,840
Secondary	14,712
Total	90,552

Percentage of total value of principal mineral production:

Crude oil — ranked 2nd	29%
Natural gas — ranked 1st	39%

State Energy Contact

Arkansas Oil and Gas Commission
 314 East Oak Street
 El Dorado, AR 71730
 (501) 862-4965

A map of California with its county boundaries delineated. Shaded counties indicate areas with oil and/or gas production. The shaded counties are: Colusa, Yuba, Sutter, Butte, Plumas, Nevada, El Dorado, Sacramento, Yolo, Solano, Contra Costa, Alameda, Santa Clara, San Joaquin, Fresno, Kings, Tulare, Kern, San Luis Obispo, Santa Barbara, Ventura, Los Angeles, Orange, Riverside, and Imperial. The map also shows major cities like San Francisco, Sacramento, and Los Angeles. A legend at the bottom left identifies the shaded area as 'Counties with oil and/or gas production'.

Background Information

Cumulative production & new reserves as of 12/31/87: (latest available data)				
	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	27,020	1,370	28,390	41,923
Production	21,604	1,223	22,827	31,763

Average 1988 natural gas price to: (\$/Mcf)	
Residential consumers	\$5.33
Commercial consumers	\$4.56
Industrial consumers	\$4.03
Electric utilities	\$2.94
All consumers	\$4.19
Severance taxes paid in 1988 (thous\$)	\$15,000
(Property taxes applied to minerals)	

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	9	1,470	1,479
Gas	18	66	84
Dry	82	59	141
Service	--	211	211
Total	109	1,806	1,915

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	69.7	2,386.6	2,906.3
Gas	107.8	398.4	506.3
Dry	633.9	346.4	980.3
Service	--	410.6	413.6
Total	811.4	3,992.0	4,803.4

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	58
New-field wildcat footage (thous. ft.)	474.1

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	2nd	14th
Production	4th	7th
Reserves (1987)	4th	8th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	435	10	445
Production	397	12	409
Net annual change	38	-2	36
Proved reserves	5,746	147	5,893

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	371	-28	343
Production	229	176	405
Net annual change	142	-204	-62
Proved reserves	3,912	1,447	5,359

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	448,356	209,317	106.79
Gas	31,140	426,569	63.59
Dry	108,974	488,672	89.79
Total	588,470	241,374	90.70

Seismic crew months worked	85
Average rotary rigs active	60

Number of producing wells: (12/31/88)

Crude oil	45,819
Flowing	1,074
Artificial lift	44,745
Natural gas	1,269
Total	47,088

Average production:	thous. bbls.	thous. b/d
Crude oil	354,730	969
NGL	8,000	22
Total	362,730	991

Natural gas marketed production (MMcf) 398,939

Average output per producing well:

Crude oil (bbls.)	7,741
Natural gas (Mcf)	314,372

Average number of employees in:

Oil and gas extraction	33,208
Refining	25,698
Transportation	12,081
Wholesale	14,651
Retail	62,828
Total petroleum industry	148,466

Number of producing stripper wells	26,988
Number of stripper well abandonments	875

Stripper well crude oil production:

(bbls.)	37,795,807
(b/d)	103,550
Percentage of oil produced by stripper wells	10%

Stripper oil reserves as of 12/31/87 (thous. bbls.)

Primary	176,765
Secondary	67,170
Total	243,935

Percentage of total value of principal mineral production:

Crude oil — ranked 1st	61%
Natural gas — ranked 2nd	11%

State Energy Contact

California Department of Conservation
Division of Oil and Gas
1416 Ninth Street, Room 1310
Sacramento, CA 95814
(916) 445-9686

COLORADO



□ Counties with oil
and/or gas production

Background Information

Number of counties 63
With oil and/or gas production 34

First year of production:
Crude oil 1862
Natural gas 1893

Year and amount of peak production:
Crude oil — 58,516 thous. bbls. 1956
Natural gas — 209,892 MMcf 1982

Deepest producing well: (ft.)
Crude oil 12,704
Natural gas 17,632

Year and depth of deepest well drilled: (ft.)
1986.....22,092

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	11,156	28%
Gas wells	7,831	20%
Dry holes	20,950	52%
Total	39,937	100%

Cumulative crude oil wellhead value as of 12/31/88
(thous. \$)\$11,981,176

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	1,761	355	2,116	7,930
Production	1,489	189	1,678	4,799

Value of Oil and Gas

Average 1988 wellhead price:
Crude oil (\$/bbl.)\$14.82
Natural gas (\$/Mcf)\$1.60

Wellhead value of 1988 production: (thous. \$)
Crude oil\$479,457
Natural gas\$308,928
Total\$788,385

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$4.68
Commercial consumers	\$4.12
Industrial consumers	\$3.49
Electric utilities	\$2.35
All consumers	\$4.31

Severance taxes paid in 1988 (thous. \$)\$18,034

1988 Industry Statistics

Number of wells drilled:			
	Exploratory	Development	Total
Oil	43	167	210
Gas	15	422	437
Dry	233	101	334
Service	--	0	0
Total	291	690	981

Total footage drilled:			
(thous. ft.)	Exploratory	Development	Total
Oil	241.6	972.7	1,214.3
Gas	93.7	2,487.5	2,581.2
Dry	1,320.7	550.9	1,871.5
Service	--	0.0	0.0
Total	1,656.0	4,011.1	5,667.0

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	175
New-field wildcat footage (thous. ft.)	998.2

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	11th	7th
Production	11th	9th
Reserves (1987)	10th	9th

Seismic crew months worked	58
Average rotary rigs active	29

Number of producing wells: (12/31/88)	
Crude oil	6,286
Flowing	534
Artificial lift	5,752
Natural gas	4,326
Total	10,612

Average production:	thous. bbls.	thous. b/d
Crude oil	32,352	88
NGL	7,000	19
Total	39,352	107

Natural gas marketed production (MMcf)	193,080
Average output per producing well:	
Crude oil (bbls.)	5,146
Natural gas (Mcf)	44,632

Average number of employees in:	
Oil and gas extraction	14,020
Refining	633
Transportation	2,054
Wholesale	2,246
Retail	8,552
Total petroleum industry	27,505

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:			
(mill. bbls.)	Crude Oil	NGL	Total
New reserves	92	27	119
Production	27	9	36
Net annual change	65	18	83
Proved reserves	272	166	438

Natural gas reserve position as of 12/31/87:			
(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	67	35	102
Production	38	131	169
Net annual change	29	-96	-67
Proved reserves	219	2,912	3,131

Cost of drilling and equipping wells:			
	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	55,688	213,363	33.55
Gas	82,137	239,468	37.42
Dry	44,879	159,710	28.42
Total	182,704	206,445	33.62

Number of producing stripper wells	5,097
Number of stripper well abandonments	224

Stripper well crude oil production:	
(bbls.)	7,323,427
(b/d)	20,064
Percentage of oil produced by stripper wells	25%

Stripper oil reserves as of 12/31/87: (thous. bbls.)	
Primary	66,554
Secondary	4,567
Total	71,121

Percentage of total value of principal mineral production:	
Crude oil — ranked 1st	34%
Natural gas — ranked 3rd	19%

State Energy Contact

Colorado Oil & Gas Conservation Commission
1580 Logan Street
Suite 380
Denver, CO 80203
(303) 866-3531

FLORIDA



■ Counties with oil
and/or gas production

Background Information

Number of counties	67	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)		
With oil and/or gas production	5	Oil wells	283	29%
First year of production:		Gas wells	3	0%
Crude oil	1943	Dry holes	698	71%
Natural gas	1943	Total	984	100%
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)	\$8,242,495	
Crude oil — 47,536 thous. bbls.	1978	Cumulative production & new reserves as of 12/31/87: (latest available data)		
Natural gas — 51,595 MMcf	1978	Crude oil		
Deepest producing well: (ft.)		NGL (mill. bbls.)		
Crude oil	16,130	Total		
Natural gas	17,452	Natural gas (Bcf)		
Year and depth of deepest well drilled: (ft.)		Reserves	644	73
1975	18,670	Production	583	64
			717	555
			647	493

Value of Oil and Gas

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$16.43	Residential consumers	\$7.60
Natural gas (\$/Mcf)	\$1.21	Commercial consumers	\$4.46
Wellhead value of 1988 production: (thous. \$)		Industrial consumers	\$2.82
Crude oil	\$127,267	Electric utilities	\$2.12
Natural gas	\$9,451	All consumers	\$2.90
Total	\$136,718	Severance taxes paid in 1988 (thous. \$)	\$9,112

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	0	1	1
Gas	0	0	0
Dry	7	1	8
Service	--	0	0
Total	7	2	9

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	0.0	16.8	16.8
Gas	0.0	0.0	0.0
Dry	93.1	9.8	102.9
Service	--	0.0	0.0
Total	93.1	26.6	119.7

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	6
New-field wildcat footage (thous. ft.)	81.3

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	28th	N/A
Production	19th	23rd
Reserves (1987)	17th	23rd

Seismic crew months worked	22
Average rotary rigs active	2

Number of producing wells: (12/31/88)

Crude oil	109
Flowing	51
Artificial lift	58
Natural gas	N/A
Total	109

Average production:	thous. bbls.	thous. b/d
Crude oil	7,746	21
NGL	1,000	3
Total	8,746	24

Natural gas marketed production (MMcf) 7,811

Average output per producing well:	
Crude oil (bbls.)	71,064
Natural gas (Mcf)	0

Average number of employees in:

Oil and gas extraction	692
Refining	284
Transportation	2,251
Wholesale	6,809
Retail	30,006
Total petroleum industry	40,042

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	3	-4	-1
Production	9	1	10
Net annual change	-6	-5	-11
Proved reserves	61	9	70

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	2	0	2
Production	9	0	9
Net annual change	-7	0	-7
Proved reserves	62	0	62

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	10,794	2,158,857	154.19
Gas	--	--	--
Dry	3,256	651,249	58.88
Total	14,051	1,405,053	105.83

Number of producing stripper wells	0
Number of stripper well abandonments	0

Stripper well crude oil production:

(bbls.)	0
(b/d)	0
Percentage of oil produced by stripper wells	0

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	0
Secondary	0
Total	0

Percentage of total value of principal mineral production:

Crude oil — ranked 4th	9%
Natural gas — ranked 9th	1%

State Energy Contact

Florida Bureau of Geology
Division of Resource Management
903 West Tennessee Street
Tallahassee, FL 32304
(904) 488-4191

ILLINOIS



■ Counties with oil
and/or gas production

Background Information

Number of counties 102
With oil and/or gas production 47

First year of production:

Crude oil 1889
Natural gas 1882

Year and amount of peak production:

Crude oil — 147,647 thous. bbls 1940
Natural gas — 18,137 MMcf 1944

Deepest producing well: (ft.)

Crude oil 5,405
Natural gas 4,832

Year and depth of deepest well drilled: (ft.)

1976 14,942

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	79,915	61%
Gas wells	1,645	1%
Dry holes	50,561	38%
Total	132,121	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) \$15,176,672

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL	Total	Natural gas (Bcf)
	(mill. bbls.)			
Reserves	3,423	N/A	3,423	N/A
Production	3,270	N/A	3,270	N/A

Value of Oil and Gas

Average 1988 wellhead price:

Crude oil (\$/bbl.) \$14.79
Natural gas (\$/Mcf) \$2.20

Wellhead value of 1988 production: (thous. \$)

Crude oil \$332,420
Natural gas \$2,860
Total \$335,280

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers \$4.56
Commercial consumers \$4.20
Industrial consumers \$3.43
Electric utilities \$3.32
All consumers \$4.32

Severance taxes paid in 1988 Not Applicable

1988 Industry Statistics

Number of wells drilled:			
	Exploratory	Development	Total
Oil	17	503	520
Gas	2	32	34
Dry	229	198	427
Service	--	144	144
Total	248	877	1,125

Total footage drilled: (thous. ft.)			
	Exploratory	Development	Total
Oil	45.8	1,033.5	1,079.2
Gas	1.1	17.5	18.6
Dry	372.9	474.0	846.9
Service	--	174.4	174.4
Total	419.8	1,699.4	2,119.1

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	90
New-field wildcat footage (thous. ft.)	113.0

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	7th	17th
Production	15th	27th
Reserves (1987)	12th	N/A

Seismic crew months worked	5
Average rotary rigs active	4

Number of producing wells: (12/31/88)	
Crude oil	32,262
Flowing	0
Artificial lift	32,262
Natural gas	277
Total	32,539

Average production:	thous. bbls.	thous. b/d
Crude oil	22,476	61
NGL	N/A	N/A
Total	22,476	61

Natural gas marketed production (MMcf)	1,300
Average output per producing well:	
Crude oil (bbls.)	697
Natural gas (Mcf)	4,693

Average number of employees in:	
Oil and gas extraction	3,785
Refining	9,566
Transportation	8,740
Wholesale	10,059
Retail	27,022
Total petroleum industry	59,172

1987 Latest Available Data

Petroleum reserve position as of 12/31/87: (mill. bbls.)			
	Crude Oil	NGL	Total
New reserves	39	N/A	39
Production	21	N/A	21
Net annual change	18	N/A	18
Proved reserves	153	N/A	153

Natural gas reserve position as of 12/31/87: (Bcf)			
	Associated dissolved	Non-associated	Total gas
New reserves	--	--	N/A
Production	--	--	N/A
Net annual change	--	--	N/A
Proved reserves	--	--	N/A

Cost of drilling and equipping wells:			
	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	49,889	73,691	32.27
Gas	316	17,564	28.84
Dry	16,822	35,564	15.86
Total	67,027	57,386	25.61

Number of producing stripper wells	31,883
Number of stripper well abandonments	533

Stripper well crude oil production:	
(bbls.)	21,682,230
(b/d)	59,403
Percentage of oil produced by stripper wells	90%

Stripper oil reserves as of 12/31/87: (thous. bbls.)	
Primary	50,898
Secondary	51,975
Total	102,873

Percentage of total value of principal mineral production:	
Crude oil — ranked 2nd	22%
Natural gas — ranked 8th	Less than 1%

State Energy Contact

Illinois Department of Mines and Minerals
704 William G. Stratton Building
Springfield, IL 62706
(217) 782-7756

INDIANA



■ Counties with oil
and/or gas production

Background Information

Number of counties	92
With oil and/or gas production	44

First year of production:	
Crude oil	1889
Natural gas	1885

Year and amount of peak production:	
Crude oil — 12,823 thous. bbls.	1953
Natural gas — 2,241 MMcf	1936

Deepest producing well: (ft.)	
Crude oil	4,508
Natural gas	3,335

Year and depth of deepest well drilled: (ft.)	
1971	7,980

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	38,501	59%
Gas wells	2,204	3%
Dry holes	25,134	38%
Total	65,839	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$)

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	528	N/A	528	N/A
Production	505	N/A	505	N/A

Value of Oil and Gas

Average 1988 wellhead price:	
Crude oil (\$/bbl.)	\$14.78
Natural gas (\$/Mcf)	\$1.57

Wellhead value of 1988 production: (thous. \$)	
Crude oil	\$54,169
Natural gas	\$314
Total	\$54,483

Average 1988 natural gas price to: (\$/Mcf)	
Residential consumers	\$5.21
Commercial consumers	\$4.59
Industrial consumers	\$3.74
Electric utilities	\$2.57
All consumers	\$4.76

Severance taxes paid in 1988 (thous. \$)

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	13	71	84
Gas	5	14	19
Dry	81	34	115
Service	--	12	12
Total	99	131	230

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	20.4	91.3	111.7
Gas	6.2	19.3	25.6
Dry	132.3	41.1	173.3
Service	--	11.5	11.5
Total	158.9	163.20	321.9

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	19
New-field wildcat footage (thous. ft.)	25.7

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	16th	22nd
Production	22nd	29th
Reserves (1987)	19th	N/A

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	-5	N/A	-5
Production	4	N/A	4
Net annual change	-9	N/A	-9
Proved reserves	23	N/A	23

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	--	--	N/A
Production	--	--	N/A
Net annual change	--	--	N/A
Proved reserves	--	--	N/A

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	4,010	37,133	25.26
Gas	555	46,261	45.57
Dry	4,031	23,992	14.63
Total	8,596	29,848	19.26

Seismic crew months worked	2
Average rotary rigs active	0

Number of producing wells: (12/31/88)

Crude oil	7,449
Flowing	0
Artificial lift	7,449
Natural gas	1,298
Total	8,747

Average production:	thous. bbls.	thous. b/d
Crude oil	3,665	10
NGL	N/A	N/A
Total	3,665	10

Natural gas marketed production (MMcf) 200

Average output per producing well:

Crude oil (bbls.)	492
Natural gas (Mcf)	154

Average number of employees in:

Oil and gas extraction	535
Refining	2,617
Transportation	3,280
Wholesale	3,314
Retail	18,173
Total petroleum industry	27,919

Number of producing stripper wells	4,985
Number of stripper well abandonments	411

Stripper well crude oil production:

(bbls.)	3,657,245
(b/d)	10,019
Percentage of oil produced by stripper wells	92%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	19,220
Secondary	15,730
Total	34,950

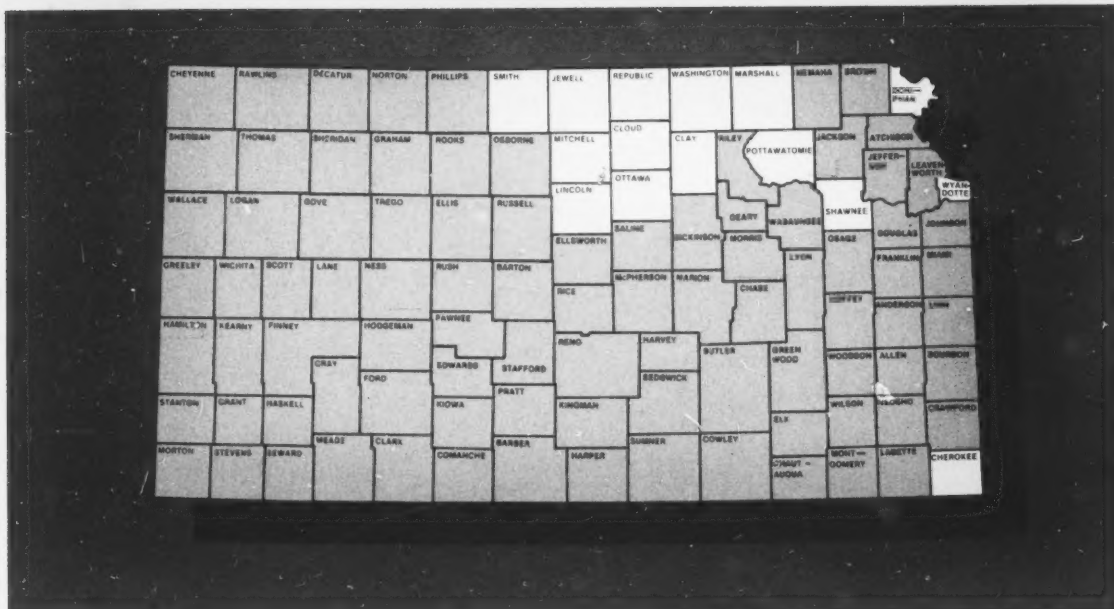
Percentage of total value of principal mineral production:

Crude oil — ranked 4th	5%
Natural gas — ranked 10th	Less than 1%

State Energy Contact

Indiana Department of Natural Resources
Division of Oil and Gas
911 State Office Building, Room 911B
Indianapolis, IN 46204
(317) 232-4055

KANSAS



□ Counties with oil
and/or gas production

Background Information

Number of counties 105
With oil and/or gas production 90

First year of production:
Crude oil 1889
Natural gas 1882

Year and amount of peak production:
Crude oil — 124,204 thous. bbls. 1956
Natural gas — 899,955 MMcf 1970

Deepest producing well: (ft.)
Crude oil 7,400
Natural gas 6,774

Year and depth of deepest well drilled: (ft.)
1984 11,300

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	121,797	51%
Gas wells	23,432	10%
Dry holes	94,012	39%
Total	239,241	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) \$30,846,701

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	5,744	1,237	6,981	41,011
Production	5,387	775	6,162	29,922

Value of Oil and Gas

Average 1988 wellhead price:
Crude oil (\$/bbl.) \$14.56
Natural gas (\$/Mcf) \$1.34

Wellhead value of 1988 production: (thous. \$)
Crude oil \$856,477
Natural gas \$630,546
Total \$1,487,023

Average 1988 natural gas price to: (\$/Mcf)
Residential consumers \$3.99
Commercial consumers \$3.25
Industrial consumers \$3.06
Electric utilities \$2.04
All consumers \$3.38

Severance taxes paid in 1988 (thous. \$) \$172,185

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	218	791	1,009
Gas	57	534	591
Dry	709	520	1,229
Service	- -	4	4
Total	984	1,849	2,833

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	888.1	2,047.9	2,936.0
Gas	246.2	1,481.5	1,727.7
Dry	2,284.2	1,491.1	4,315.3
Service	- -	10.3	10.3
Total	3,958.5	5,030.8	8,989.3

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 407
 New-field wildcat footage (thous. ft.) 1,641.2

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	4th	4th
Production	8th	6th
Reserves (1987)	8th	6th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	105	41	146
Production	60	19	79
Net annual change	45	22	67
Proved reserves	357	462	819

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	4	454	458
Production	21	441	462
Net annual change	-17	13	-4
Proved reserves	115	10,974	11,089

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	85,978	70,301	25.64
Gas	49,656	114,152	38.91
Dry	77,936	52,306	14.77
Total	213,570	67,843	21.57

Seismic crew months worked 43
 Average rotary rigs active 40

Number of producing wells: (12/31/88)

Crude oil	47,484
Flowing	65
Artificial lift	47,419
Natural gas	12,538
Total	60,022

Average production:

	thous. bbls.	thous. b/d
Crude oil	58,824	161
NGL	13,000	36
Total	71,824	197

Natural gas marketed production (MMcf) 470,557

Average output per producing well:

Crude oil (bbls.)	1,239
Natural gas (Mcf)	37,530

Average number of employees in:

Oil and gas extraction	9,027
Refining	2,429
Transportation	4,646
Wholesale	2,444
Retail	9,350
Total petroleum industry	27,890

Number of producing stripper wells 51,953
 Number of stripper well abandonments 1,521

Stripper well crude oil production:

(bbls.)	57,802,761
(b/d)	158,363

Percentage of oil produced by stripper wells 97%

Stripper oil reserves as of 12/31/87 (thous. bbls.)

Primary	166,390
Secondary	130,740
Total	297,130

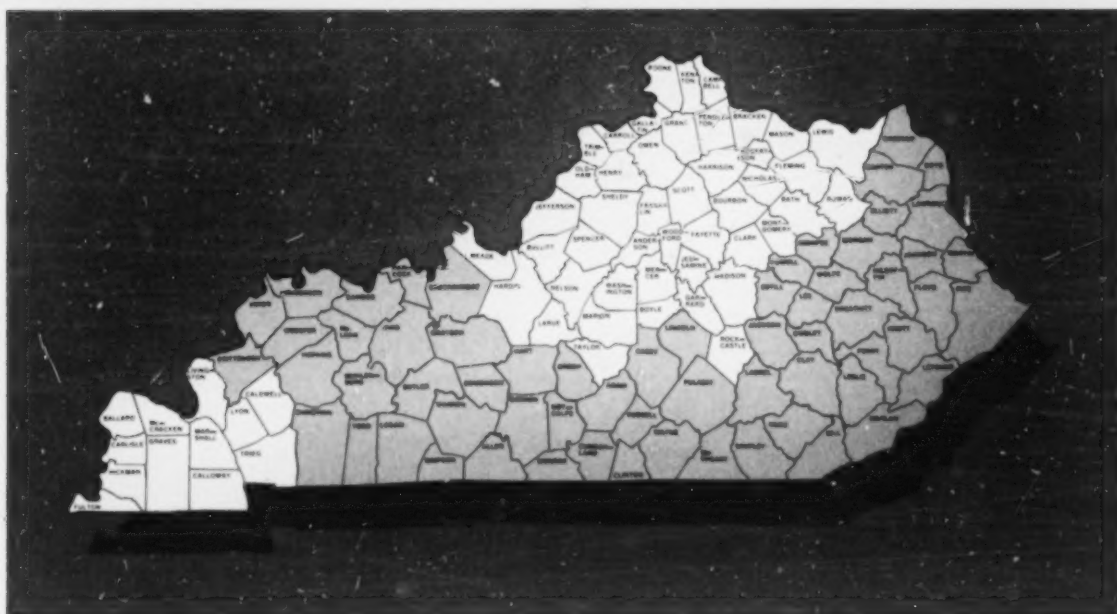
Percentage of total value of principal mineral production:

Crude oil — ranked 1st	54%
Natural gas — ranked 2nd	27%

State Energy Contact

Kansas Corporation Commission
 202 West 1st Street
 Colorado Derby Building, Suite 200
 Wichita, KS 67202
 (316) 263-3238

KENTUCKY



□ Counties with oil
and/or gas production

Background Information

Number of counties 120
With oil and/or gas production 63

First year of production:
Crude oil 1860
Natural gas 1888

Year and amount of peak production:
Crude oil — 27,272 thous. bbls. 1959
Natural gas — 96,459 MMcf 1947

Deepest producing well: (ft.)
Crude oil 7,598
Natural gas 10,934

Year and depth of deepest well drilled: (ft.)
1977 15,200

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	53,119	51%
Gas wells	11,980	11%
Dry holes	39,889	38%
Total	104,988	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) \$16,125,818

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	718	142	860	4,675
Production	693	119	812	3,802

Value of Oil and Gas

Average 1988 wellhead price:
Crude oil (\$/bbl.) \$14.58
Natural gas (\$/Mcf) \$3.12

Wellhead value of 1988 production: (thous. \$)
Crude oil \$79,578
Natural gas \$218,400
Total \$297,978

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$4.50
Commercial consumers	\$4.27
Industrial consumers	\$3.59
Electric utilities	\$2.52
All consumers	\$4.27

Severance taxes paid in 1988 (thous. \$) \$14,960

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	11	251	262
Gas	12	303	315
Dry	94	171	265
Service	- -	9	9
Total	117	734	851

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	14.9	407.2	422.1
Gas	28.2	689.1	717.4
Dry	150.9	229.2	380.1
Service	- -	10.6	10.6
Total	194.0	1,336.1	1,530.2

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 56
 New-field wildcat footage (thous. ft.) 94.2

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	10th	9th
Production	21st	18th
Reserves (1987)	20th	17th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	-3	-5	-8
Production	3	1	4
Net annual change	0	-4	-4
Proved reserves	25	23	48

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	4	113	117
Production	2	58	60
Net annual change	2	55	57
Proved reserves	19	921	940

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	8,308	45,150	24.04
Gas	25,217	96,616	43.71
Dry	6,162	26,559	17.72
Total	39,686	58,621	31.26

Seismic crew months worked Less than 1
 Average rotary rigs active 5

Number of producing wells: (12/31/88)

Crude oil	22,883
Flowing	0
Artificial lift	22,883
Natural gas	10,797
Total	33,680

Average production:

	thous. bbls.	thous. b/d
Crude oil	5,458	15
NGL	1,000	3
Total	6,458	18

Natural gas marketed production (MMcf) 70,000

Average output per producing well:

Crude oil (bbls.)	239
Natural gas (Mcf)	6,483

Average number of employees in:

Oil and gas extraction	2,149
Refining	3,870
Transportation	3,664
Wholesale	3,076
Retail	10,706
Total petroleum industry	23,461

Number of producing stripper wells 18,073
 Number of stripper well abandonments 772

Stripper well crude oil production:

(bbls.)	4,881,653
(b/d)	13,374

Percentage of oil produced by stripper wells 85%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	10,703
Secondary	16,763
Total	27,466

Percentage of total value of principal mineral production:

Crude oil — ranked 4th	2%
Natural gas — ranked 3rd	3%

State Energy Contact

Kentucky Department of Mines and Minerals
 Oil and Gas Division
 P.O. Box 690
 Lexington, KY 40586
 (606) 257-3812

LOUISIANA



■ Parishes with oil
and/or gas production

Background Information

Number of parishes	64	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)				
With oil and/or gas production	64	Oil wells	84,679		46%	
First year of production:		Gas wells	31,770		17%	
Crude oil	1902	Dry holes	69,822		37%	
Natural gas	1905	Total	186,271		100%	
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)				
Crude oil — 935,243 thous. bbls.	1971	\$181,292,187				
Natural gas — 8,242,423 MMcf	1973	Cumulative production & new reserves as of 12/31/87: (latest available data)				
Deepest producing well: (ft.)		Crude oil	NGL	Total	Natural	
Crude oil	22,856		(mill. bbls.)		gas (Bcf)	
Natural gas	21,862	Reserves	25,868	3,837	29,705	234,204
Year and depth of deepest well drilled: (ft.)		Production	23,547	2,780	26,327	197,647
1981	25,703					

Value of Oil and Gas

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$15.21	Residential consumers	\$5.70
Natural gas (\$/Mcf)	\$1.81	Commercial consumers	\$5.14
Wellhead value of 1988 production: (thous. \$)		Industrial consumers	\$1.93
Crude oil	\$6,648,884	Electric utilities	\$1.70
Natural gas	\$9,223,626	All consumers	\$2.26
Total	\$15,872,510	Severance taxes paid in 1988 (thous. \$)	\$462,703

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	14	578	592
Gas	28	438	466
Dry	298	663	961
Service	--	1	1
Total	340	1,680	2,020

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	114.9	3,229.5	3,344.4
Gas	263.8	3,442.8	3,706.6
Dry	2,798.3	5,227.0	8,025.3
Service	--	12.3	12.3
Total	3,177.0	11,911.6	15,088.6

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 297
 New-field wildcat footage (thous. ft.) 2,796.3

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	6th	6th
Production	3rd	2nd
Reserves (1987)	3rd	2nd

Seismic crew months worked 79
 Average rotary rigs active 164

Number of producing wells: (12/31/88)

Crude oil	27,079
Flowing	2,205
Artificial lift	24,874
Natural gas	16,154
Total	43,233

Average production:	thous. bbls.	thous. b/d
Crude oil	165,006	451
NGL	130,000	356
Total	295,006	807

Natural gas marketed production (MMcf) 5,095,926

Average output per producing well:

Crude oil (bbls.)	6,093
Natural gas (Mcf)	315,459

Average number of employees in:

Oil and gas extraction	54,000
Refining	10,900
Transportation	7,100
Wholesale	5,000
Retail	7,200
Total petroleum industry	84,200

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	273	110	383
Production	418	143	561
Net annual change	-145	-33	-178
Proved reserves	2,321	1,057	3,378

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	337	1,914	2,251
Production	882	4,078	4,960
Net annual change	-545	-2,164	-2,709
Proved reserves	6,689	29,868	36,557

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	588,673	611,926	107.22
Gas	542,403	1,086,980	145.10
Dry	830,289	890,868	108.31
Total	1,961,365	819,626	116.09

Number of producing stripper wells 15,000
 Number of stripper well abandonments 1,267

Stripper well crude oil production:

(bbls.)	8,809,543
(b/d)	24,135

Percentage of oil produced by stripper wells 6%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	59,165
Secondary	56,393
Total	115,558

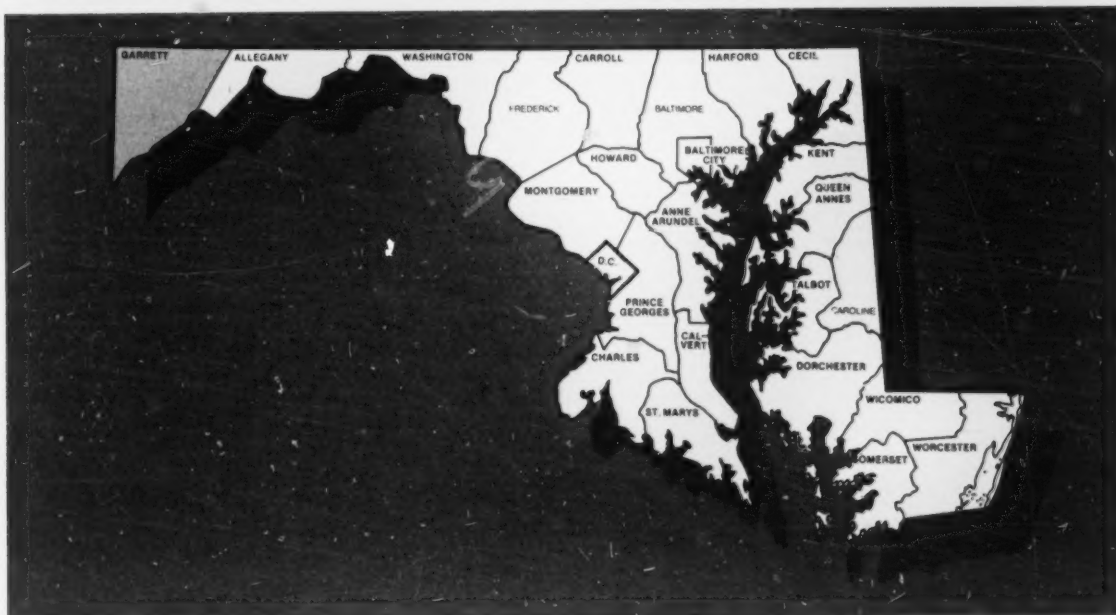
Percentage of total value of principal mineral production:

Crude oil — ranked 2nd	48%
Natural gas — ranked 1st	50%

State Energy Contact

Louisiana Department of Natural Resources
 P.O. Box 44396
 Capitol Station
 Baton Rouge, LA 70804
 (504) 342-4500

MARYLAND



■ Counties with oil
and/or gas production

Background Information

Number of counties 23
With oil and/or gas production 1

First year of production:
Crude oil Not Applicable
Natural gas 1951

Year and amount of peak production:
Crude oil Not Applicable
Natural gas — 4,543 MMcf 1959

Deepest producing well: (ft.)
Crude oil Not Applicable
Natural gas 8,675

Year and depth of deepest well drilled: (ft.)
1973 11,617

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	0	0%
Gas wells	72	59%
Dry holes	50	41%
Total	122	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) Not Applicable

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	0	0	0	N/A
Production	0	0	0	N/A

Value of Oil and Gas

Average 1988 wellhead price:
Crude oil (\$/bbl.) Not Applicable
Natural gas (\$/Mcf) \$0.94

Wellhead value of 1988 production: (thous. \$)
Crude oil \$ 0
Natural gas \$47
Total \$47

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$5.88
Commercial consumers	\$5.02
Industrial consumers	\$4.36
Electric utilities	\$2.67
All consumers	\$5.30

Severance taxes paid in 1988 (thous. \$) \$2

1988 Industry Statistics

Number of wells drilled:			
	Exploratory	Development	Total
Oil	0	0	0
Gas	0	0	0
Dry	1	1	2
Service	--	0	0
Total	1	1	2

Total footage drilled:			
(thous. ft.)	Exploratory	Development	Total
Oil	0.0	0.0	0.0
Gas	0.0	0.0	0.0
Dry	4.4	4.4	8.8
Service	--	0.0	0.0
Total	4.4	4.4	8.8

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	0
New-field wildcat footage (thous. ft.)	0

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	--	N/A
Production	--	31st
Reserves (1987)	--	N/A

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:			
(mill. bbls.)	Crude Oil	NGL	Total
New reserves	0	0	0
Production	0	0	0
Net annual change	0	0	0
Proved reserves	0	0	0

Natural gas reserve position as of 12/31/87:			
(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	--	--	N/A
Production	--	--	N/A
Net annual change	--	--	N/A
Proved reserves	--	--	N/A

Cost of drilling and equipping wells:			
	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	N/A	--	--
Gas	N/A	--	--
Dry	N/A	--	--
Total	N/A	--	--

Seismic crew months worked	5
Average rotary rigs active	0

Number of producing wells: (12/31/88)	
Crude oil	0
Flowing	0
Artificial lift	0
Natural gas	N/A
Total	0

Average production:	thous. bbls.	thous. b/d
Crude oil	0	--
NGL	0	--
Total	0	--

Natural gas marketed production (MMcf)	50
Average output per producing well:	
Crude oil (bbls.)	0
Natural gas (Mcf)	0

Average number of employees in:	
Oil and gas extraction	32
Refining	380
Transportation	1,132
Wholesale	2,775
Retail	13,683
Total petroleum industry	18,002

Number of producing stripper wells	0
Number of stripper well abandonments	0

Stripper well crude oil production:	
(bbls.)	0
(b/d)	0
Percentage of oil produced by stripper wells	0

Stripper oil reserves as of 12/31/87: (thous. bbls.)	
Primary	0
Secondary	0
Total	0

Percentage of total value of principal mineral production:	
Crude oil	Not Applicable
Natural gas — ranked 9th	Less than 1%

State Energy Contact

Maryland Geological Survey
2300 Saint Paul Street
Baltimore, MD 21218
(301) 554-5500

MICHIGAN



Background Information

Number of counties	83
With oil and/or gas production	61
First year of production:	
Crude oil	1889
Natural gas	1909
Year and amount of peak production:	
Crude oil — 34,862 thous. bbls.	1979
Natural gas — 159,731 MMcf	1979
Deepest producing well: (ft.)	
Crude oil	10,515
Natural gas	11,635
Year and depth of deepest well drilled: (ft.)	
1975	17,466

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	14,280	38%
Gas wells	3,227	9%
Dry holes	19,656	53%
Total	37,163	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$)

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL	Total	Natural gas (Bcf)
	(mill. bbls.)			
Reserves	1,183	245	1,428	2,894
Production	1,032	134	1,166	1,323

Value of Oil and Gas

Average 1988 wellhead price:	
Crude oil (\$/bbl.)	\$14.92
Natural gas (\$/Mcf)	\$3.20
Wellhead value of 1988 production: (thous. \$)	
Crude oil	\$346,890
Natural gas	\$476,480
Total	\$823,370

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$5.33
Commercial consumers	\$4.90
Industrial consumers	\$4.65
Electric utilities	\$0.44
All consumers	\$5.00

Severance taxes paid in 1988 (thous. \$)

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	11	62	73
Gas	28	283	311
Dry	211	30	241
Service	--	3	3
Total	250	378	628

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	44.3	212.3	256.7
Gas	147.9	601.3	749.2
Dry	969.7	128.3	1,097.9
Service	--	10.0	10.0
Total	1,161.9	951.9	2,113.8

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	226
New-field wildcat footage (thous. ft.)	998.2

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	17th	10th
Production	14th	13th
Reserves (1987)	12th	14th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	26	32	58
Production	21	9	30
Net annual change	5	23	28
Proved reserves	151	111	262

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	65	405	470
Production	73	68	141
Net annual change	-8	337	329
Proved reserves	569	1,002	1,571

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	27,262	302,911	65.97
Gas	50,491	413,860	106.60
Dry	90,820	293,916	56.08
Total	168,573	323,557	67.26

Seismic crew months worked	237
Average rotary rigs active	20

Number of producing wells: (12/31/88)

Crude oil	4,866
Flowing	630
Artificial lift	4,236
Natural gas	687
Total	5,553

Average production:

	thous. bbls.	thous. b/d
Crude oil	23,250	64
NGL	8,000	22
Total	31,250	86

Natural gas marketed production (MMcf) 148,900

Average output per producing well:

Crude oil (bbls.)	4,778
Natural gas (Mcf)	216,739

Average number of employees in:

Oil and gas extraction	4,534
Refining	2,547
Transportation	6,853
Wholesale	6,531
Retail	24,110
Total petroleum industry	44,575

Number of producing stripper wells	3,015
Number of stripper well abandonments	170

Stripper well crude oil production:

(bbls.)	2,673,990
(b/d)	7,326

Percentage of oil produced by stripper wells 13%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	22,460
Secondary	25,330
Total	47,790

Percentage of total value of principal mineral production:

Crude oil — ranked 3rd	20%
Natural gas — ranked 2nd	21%

State Energy Contact

Michigan Geological Survey
Department of Natural Resources
P.O. Box 30028
Lansing, MI 48909
(517) 334-6907

MISSISSIPPI



■ Counties with oil
and/or gas production

Background Information

Number of counties 82
With oil and/or gas production 45

First year of production:

Crude oil 1889
Natural gas 1923

Year and amount of peak production:

Crude oil — 65,119 thous. bbls. 1970
Natural gas — 181,238 MMcf 1981

Deepest producing well: (ft.)

Crude oil 21,533
Natural gas 21,727

Year and depth of deepest well drilled: (ft.)

1986..... 25,500

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	7,661	32%
Gas wells	1,380	6%
Dry holes	14,743	62%
Total	23,784	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$).....\$12,611,835

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	2,344	113	2,457	8,077
Production	2,142	102	2,244	6,854

Value of Oil and Gas

Average 1988 wellhead price:

Crude oil (\$/bbl.) \$13.98
Natural gas (\$/Mcf) \$1.86

Wellhead value of 1988 production: (thous. \$)

Crude oil \$385,191
Natural gas \$242,339
Total \$627,530

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$5.80
Commercial consumers	\$5.05
Industrial consumers	\$2.58
Electric utilities	\$1.90
All consumers	\$3.41

Severance taxes paid in 1988 (thous. \$) \$44,322

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	10	95	105
Gas	9	19	28
Dry	118	91	209
Service	--	0	0
Total	137	205	342

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	126.2	950.1	1,076.3
Gas	34.3	122.4	156.7
Dry	1,059.0	717.8	1,776.7
Service	--	0.0	0.0
Total	1,219.5	1,790.3	3,009.8

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 124
New-field wildcat footage (thous. ft.) 1,093.8

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	15th	19th
Production	12th	15th
Reserves (1987)	10th	15th

Seismic crew months worked 41
Average rotary rigs active 18

Number of producing wells: (12/31/88)

Crude oil	2,050
Flowing	207
Artificial lift	1,843
Natural gas	535
Total	2,585

Average production:	thous. bbls.	thous. b/d
Crude oil	27,553	75
NGL	1,000	3
Total	28,553	78

Natural gas marketed production (MMcf) 130,290
Average output per producing well:
Crude oil (bbls.) 13,440
Natural gas (Mcf) 243,532

Average number of employees in:

Oil and gas extraction	5,655
Refining	1,739
Transportation	2,379
Wholesale	3,053
Retail	6,186
Total petroleum industry	19,012

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	30	1	31
Production	27	1	28
Net annual change	3	0	3
Proved reserves	202	11	213

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	7	90	97
Production	12	166	178
Net annual change	-5	-76	-81
Proved reserves	61	1,162	1,223

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	48,591	516,930	55.08
Gas	34,746	914,365	107.26
Dry	48,569	268,335	35.23
Total	131,906	421,425	51.03

Number of producing stripper wells 644
Number of stripper well abandonments 137

Stripper well crude oil production:

(bbls.)	1,270,010
(b/d)	3,479

Percentage of oil produced by stripper wells 4%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	12,144
Secondary	3,036
Total	15,180

Percentage of total value of principal mineral production:

Crude oil — ranked 1st	55%
Natural gas — ranked 2nd	32%

State Energy Contact

Mississippi State Oil and Gas Board
P.O. Box 1332
Jackson, MS 39215
(601) 359-3725

MISSOURI



Background Information

Number of counties	114
With oil and/or gas production	6

First year of production:

Crude oil	1888
Natural gas	1887

Year and amount of peak production:

Crude oil — 285 thous. bbls.	1984
Natural gas — 1,369 MMcf	1938

Deepest producing well: (ft.)

Crude oil	2,975
Natural gas	765

Year and depth of deepest well drilled: (ft.)

1988.....	10,089
-----------	--------

Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)

Oil wells	695	35%
Gas wells	187	10%
Dry holes	1,076	55%
Total	1,958	100%

Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)

\$59,784

Cumulative production & new reserves as of 12/31/87: (latest available data)

	Crude oil	NGL	Total	Natural gas (Bcf)
	(mill. bbls.)			
Reserves	N/A	0	0	N/A
Production	N/A	0	0	N/A

Value of Oil and Gas

Average 1988 wellhead price:

Crude oil (\$/bbl.)	\$14.50
Natural gas (\$/Mcf)	\$3.70

Wellhead value of 1988 production: (thous. \$)

Crude oil	\$2,262
Natural gas	\$15
Total	\$2,277

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$4.76
Commercial consumers	\$4.22
Industrial consumers	\$3.85
Electric utilities	\$2.77
All consumers	\$4.45

Severance taxes paid in 1988 Not Applicable

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	0	2	2
Gas	0	0	0
Dry	10	0	10
Service	-	0	0
Total	10	2	12

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	0.0	5.6	5.6
Gas	0.0	0.0	0.0
Dry	37.5	0.0	37.5
Service	-	0.0	0.0
Total	37.5	5.6	43.1

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 10
 New-field wildcat footage (thous. ft.) 37.5

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	27th	N/A
Production	29th	32nd
Reserves (1987)	N/A	N/A

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	N/A	0	0
Production	N/A	0	0
Net annual change	N/A	0	0
Proved reserves	N/A	0	0

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	-	-	N/A
Production	-	-	N/A
Net annual change	-	-	N/A
Proved reserves	-	-	N/A

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	N/A	-	-
Gas	N/A	-	-
Dry	N/A	-	-
Total	N/A	-	-

Seismic crew months worked Less than 1
 Average rotary rigs active 0

Number of producing wells: (12/31/88)

Crude oil	286
Flowing	0
Artificial lift	286
Natural gas	0
Total	286

Average production:

	thous. bbls.	thous. b/d
Crude oil	156	-
NGL	0	-
Total	156	-

Natural gas marketed production (MMcf) 4

Average output per producing well:

Crude oil (bbls.)	545
Natural gas (Mcf)	N/A

Average number of employees in:

Oil and gas extraction	78
Refining	374
Transportation	4,684
Wholesale	6,396
Retail	19,886
Total petroleum industry	31,418

Number of producing stripper wells 289

Number of stripper well abandonments 51

Stripper well crude oil production:

(bbls.)	100,941
(b/d)	276

Percentage of oil produced by stripper wells 92%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	1,110
Secondary	500
Total	1,610

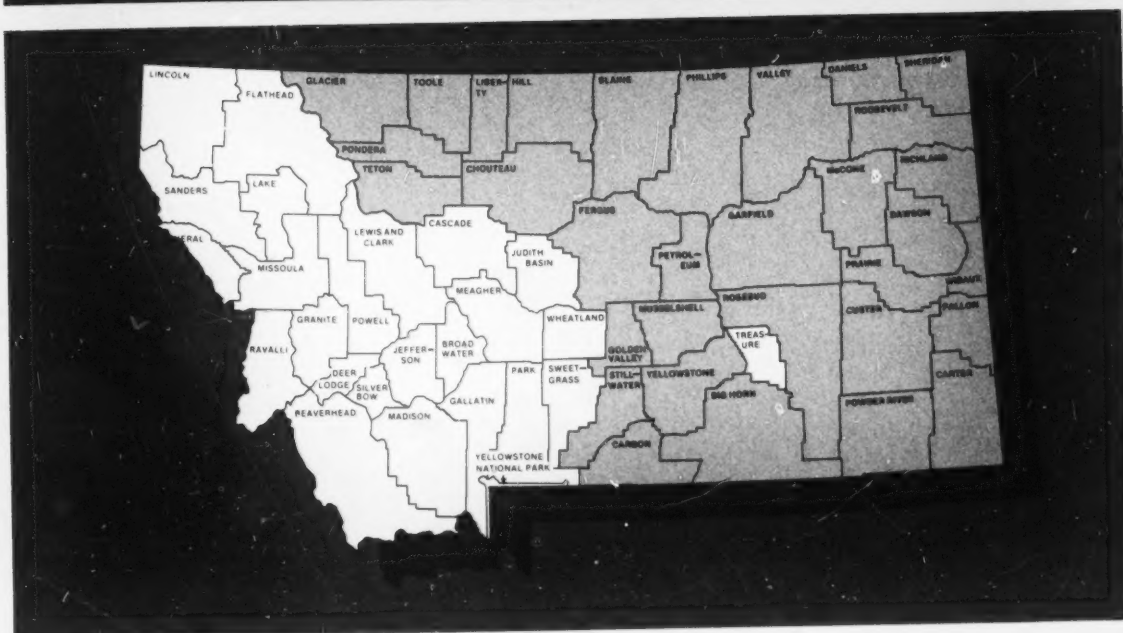
Percentage of total value of principal mineral production:

Crude oil — ranked 12th	Less than 1%
Natural gas — ranked 14th	Less than 1%

State Energy Contact

Missouri Department of Economic Development
 Oil and Gas Research Division
 P.O. Box 118
 Jefferson City, MO 65101
 (314) 751-3674

MONTANA



■ Counties with oil
and/or gas production

Background Information

Number of counties	56	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)				
With oil and/or gas production	32	Oil wells	10,676		37%	
First year of production:		Gas wells	4,330		15%	
Crude oil	1916	Dry holes	13,971		48%	
Natural gas	1915	Total	28,971		100%	
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)				
Crude oil — 48,460 thous. bbls.	1968	\$10,141,373				
Natural gas — 56,565 MMcf	1981	Cumulative production & new reserves as of 12/31/87: (latest available data)				
Deepest producing well: (ft.)		Crude oil	NGL	Total	Natural	
Crude oil	13,012		(mill. bbls.)		gas (Bcf)	
Natural gas	5,800					
Year and depth of deepest well drilled: (ft.)		Reserves	1,494	48	1,542	2,977
1984	17,774	Production	1,248	32	1,280	2,176

Value of Oil and Gas

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$13.84	Residential consumers	\$4.40
Natural gas (\$/Mcf)	\$1.70	Commercial consumers	\$4.39
Wellhead value of 1988 production: (thous. \$)		Industrial consumers	\$3.07
Crude oil	\$322,998	Electric utilities	\$1.57
Natural gas	\$80,702	All consumers	\$4.11
Total	\$403,700	Severance taxes paid in 1988 (thous. \$)	\$64,114

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	11	97	108
Gas	12	60	72
Dry	116	48	164
Service	- -	8	8
Total	139	213	352

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	83.5	453.9	537.3
Gas	17.8	97.5	115.3
Dry	552.9	137.9	690.7
Service	- -	24.5	24.5
Total	654.2	713.8	1,368.0

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 109
 New-field wildcat footage (thous. ft.) 508.5

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	14th	15th
Production	13th	20th
Reserves (1987)	11th	19th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	23	1	24
Production	25	1	26
Net annual change	-2	0	-2
Proved reserves	246	16	262

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	10	11	21
Production	11	32	43
Net annual change	-1	-21	-22
Proved reserves	97	704	801

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	28,953	308,014	51.94
Gas	3,976	56,806	34.44
Dry	20,639	174,903	37.20
Total	53,568	189,958	43.63

Seismic crew months worked 19
 Average rotary rigs active 8

Number of producing wells: (12/31/88)

Crude oil	4,128
Flowing	375
Artificial lift	3,753
Natural gas	2,023
Total	6,151

Average production:	thous. bbls.	thous. b/d
Crude oil	23,338	64
NGL	1,000	3
Total	24,338	67

Natural gas marketed production (MMcf) 47,472

Average output per producing well:

Crude oil (bbls.)	5,654
Natural gas (Mcf)	23,466

Average number of employees in:

Oil and gas extraction	1,938
Refining	766
Transportation	355
Wholesale	1,269
Retail	3,218
Total petroleum industry	7,546

Number of producing stripper wells 3,300
 Number of stripper well abandonments 140

Stripper well crude oil production:

(bbls.)	2,650,921
(b/d)	7,262
Percentage of oil produced by stripper wells	11%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	27,190
Secondary	4,060
Total	31,250

Percentage of total value of principal mineral production:

Crude oil — ranked 2nd	32%
Natural gas — ranked 5th	6%

State Energy Contact

Montana Department of Natural Resources
 Board of Oil and Gas
 1520 East Sixth Avenue
 Helena, MT 59620
 (406) 444-6675

NEBRASKA



□ Counties with oil
and/or gas production

Background Information

Number of counties	93
With oil and/or gas production	18

First year of production:

Crude oil	1939
Natural gas	1949

Year and amount of peak production:

Crude oil — 24,894 thous. bbls.	1962
Natural gas — 15,743 MMcf	1961

Deepest producing well: (ft.)

Crude oil	8,457
Natural gas	5,832

Year and depth of deepest well drilled: (ft.)

1979	9,971
------------	-------

Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)

Oil wells	5,324	31%
Gas wells	214	1%
Dry holes	11,858	68%
Total	17,396	100%

Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)

\$2,866,780

Cumulative production & new reserves as of 12/31/87: (latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	470	N/A	470	N/A
Production	437	N/A	437	N/A

Value of Oil and Gas

Average 1988 wellhead price:

Crude oil (\$/bbl.)	\$14.12
Natural gas (\$/Mcf)	\$2.66

Wellhead value of 1988 production: (thous. \$)

Crude oil	\$84,409
Natural gas	\$3,192
Total	\$87,601

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$4.48
Commercial consumers	\$3.75
Industrial consumers	\$2.83
Electric utilities	\$2.58
All consumers	\$3.90

Severance taxes paid in 1988 (thous. \$)

\$2,289

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	14	23	37
Gas	0	0	0
Dry	75	20	95
Service	--	1	1
Total	89	44	133

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	77.7	108.9	186.6
Gas	0.0	0.0	0.0
Dry	405.4	106.0	511.4
Service	--	2.5	2.5
Total	483.1	217.4	700.4

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 66
 New-field wildcat footage (thous. ft.) 335.8

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	21st	N/A
Production	20th	28th
Reserves (1987)	18th	N/A

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	-7	N/A	-7
Production	5	N/A	5
Net annual change	-12	N/A	-12
Proved reserves	33	N/A	33

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	--	--	N/A
Production	--	--	N/A
Net annual change	--	--	N/A
Proved reserves	--	--	N/A

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	7,536	150,719	28.84
Gas	117	117,192	32.32
Dry	18,091	131,094	23.02
Total	25,744	136,213	24.50

Seismic crew months worked 5
 Average rotary rigs active 3

Number of producing wells: (12/31/88)

Crude oil	1,824
Flowing	0
Artificial lift	1,824
Natural gas	N/A
Total	1,824

Average production:	thous. bbls.	thous. b/d
Crude oil	5,978	16
NGL	N/A	N/A
Total	5,978	16

Natural gas marketed production (MMcf) 1,200

Average output per producing well:

Crude oil (bbls.)	3,277
Natural gas (Mcf)	N/A

Average number of employees in:

Oil and gas extraction	595
Refining	0
Transportation	1,817
Wholesale	2,282
Retail	6,900
Total petroleum industry	11,594

Number of producing stripper wells 1,589
 Number of stripper well abandonments 39

Stripper well crude oil production:

(bbls.)	2,687,697
(b/d)	7,363

Percentage of oil produced by stripper wells 44%

Stripper oil reserves as of 12/31/87 (thous. bbls.)

Primary	20,405
Secondary	5,625
Total	26,030

Percentage of total value of principal mineral production:

Crude oil — ranked 1st	53%
Natural gas — ranked 5th	2%

State Energy Contact

Nebraska Oil & Gas Conservation Commission
 P.O. Box 399
 Sidney, NE 69162
 (308) 254-4595

NEVADA



■ Counties with oil
and/or gas production

Background Information

Number of counties 16
With oil and/or gas production 2

First year of production:
Crude oil 1954
Natural gas Not Applicable

Year and amount of peak production:
Crude oil — 3,230 thous. bbls. 1988
Natural gas Not Applicable

Deepest producing well: (ft.)
Crude oil 8,694
Natural gas Not Applicable

Year and depth of deepest well drilled: (ft.)
19,562..... 1980

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	54	14%
Gas wells	1	0%
Dry holes	344	86%
Total	399	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$)\$380,753

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	N/A	0	0	0
Production	N/A	0	0	0

Value of Oil and Gas

Average 1988 wellhead price:
Crude oil (\$/bbl.)\$12.50
Natural gas (\$/Mcf) Not Applicable

Wellhead value of 1988 production: (thous. \$)
Crude oil\$40,375
Natural gas\$ 0
Total\$40,375

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$5.93
Commercial consumers	\$4.70
Industrial consumers	\$3.83
Electric utilities	\$2.79
All consumers	\$4.68
Severance taxes paid in 1988 (thous. \$)	\$180

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	2	2	4
Gas	0	0	0
Dry	12	1	13
Service	--	2	2
Total	14	5	19

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	14.8	9.1	23.9
Gas	0.0	0.0	0.0
Dry	65.6	5.0	70.6
Service	--	4.2	4.2
Total	80.4	18.3	98.7

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	11
New-field wildcat footage (thous. ft.)	64.1

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	25th	--
Production	23rd	--
Reserves (1987)	N/A	--

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	N/A	0	0
Production	N/A	0	0
Net annual change	N/A	0	0
Proved reserves	N/A	0	0

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	--	--	0
Production	--	--	0
Net annual change	--	--	0
Proved reserves	--	--	0

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	N/A	--	--
Gas	N/A	--	--
Dry	N/A	--	--
Total	N/A	--	--

Seismic crew months worked 22

Average rotary rigs active 2

Number of producing wells: (12/31/88)

Crude oil	38
Flowing	7
Artificial lift	31
Natural gas	0
Total	38

Average production:	thous. bbls.	thous. b/d
Crude oil	3,230	9
NGL	0	0
Total	3,230	9

Natural gas marketed production (MMcf) N/A

Average output per producing well:

Crude oil (bbls.)	85,000
Natural gas (Mcf)	N/A

Average number of employees in:

Oil and gas extraction	243
Refining	23
Transportation	801
Wholesale	464
Retail	4,104
Total petroleum industry	5,635

Number of producing stripper wells 0

Number of stripper well abandonments 0

Stripper well crude oil production:

(bbls.)	0
(b/d)	0
Percentage of oil produced by stripper wells	0

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	0
Secondary	0
Total	0

Percentage of total value of principal mineral production:

Crude oil — ranked 4th	Less than 1%
Natural gas	Not Applicable

State Energy Contact

Nevada Department of Minerals
400 West King Street
Suite 106
Carson City, NV 89710
(702) 885-5050

NEW MEXICO



■ Counties with oil and/or gas production

Background Information

Number of counties	39	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)			
With oil and/or gas production	10	Oil wells	30,643	50%	
First year of production:		Gas wells	18,211	29%	
Crude oil	1911	Dry holes	12,929	21%	
Natural gas	1924	Total	61,783	100%	
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)			
Crude oil — 129,227 thous. bbls.	1969				\$28,116,696
Natural gas — 1,244,779 MMcf	1974	Cumulative production & new reserves as of 12/31/87: (latest available data)			
Deepest producing well: (ft.)		Crude oil	NGL	Total	Natural gas (Bcf)
Crude oil	17,652	(mill. bbls.)			
Natural gas	17,544	Reserves	5,974	2,048	8,022
Year and depth of deepest well drilled: (ft.)		Production	5,320	1,277	6,597
1968	22,926				38,606

Value of Oil and Gas

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$14.78	Residential consumers	\$5.23
Natural gas (\$/Mcf)	\$1.71	Commercial consumers	\$3.94
		Industrial consumers	\$3.39
		Electric utilities	\$2.22
Wellhead value of 1988 production: (thous. \$)		All consumers	\$3.90
Crude oil	\$1,052,853		
Natural gas	\$1,336,933	Severance taxes paid in 1988 (thous. \$)	\$238,541
Total	\$2,389,786		

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	31	367	398
Gas	22	293	315
Dry	57	106	163
Service	-	9	9
Total	110	775	885

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	268.3	2,160.0	2,428.3
Gas	115.1	1,471.0	1,586.1
Dry	376.7	782.4	1,159.1
Service	-	35.9	35.9
Total	760.0	4,449.3	5,209.5

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 32
New-field wildcat footage (thous. ft.) 146,072

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	8th	9th
Production	7th	4th
Reserves (1987)	7th	5th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	79	242	321
Production	69	48	117
Net annual change	10	194	204
Proved reserves	654	771	1,425

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	182	689	871
Production	183	607	790
Net annual change	-1	82	81
Proved reserves	1,445	11,176	12,621

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	136,839	355,425	54.79
Gas	73,620	345,636	61.05
Dry	50,072	329,422	52.80
Total	260,531	347,375	56.01

Seismic crew months worked 68
Average rotary rigs active 37

Number of producing wells: (12/31/88)

Crude oil	17,890
Flowing	3,261
Artificial lift	14,629
Natural gas	18,964
Total	36,854

Average production:	thous. bbls.	thous. b/d
Crude oil	71,235	195
NGL	30,000	82
Total	101,235	277

Natural gas marketed production (MMcf) 781,832

Average output per producing well:

Crude oil (bbls.)	3,982
Natural gas (Mcf)	41,227

Average number of employees in:

Oil and gas extraction	9,100
Refining	676
Transportation	3,257
Wholesale	2,323
Retail	4,364
Total petroleum industry	19,820

Number of producing stripper wells 14,622
Number of stripper well abandonments 1,000

Stripper well crude oil production:

(bbls.)	14,377,454
(b/d)	39,390
Percentage of oil produced by stripper wells	21%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	66,760
Secondary	34,390
Total	101,150

Percentage of total value of principal mineral production:

Crude oil — ranked 2nd	34%
Natural gas — ranked 1st	36%

State Energy Contact

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504
(505) 827-5800

Background Information

Value of Oil and Gas

Severance taxes paid in 1988 Not Applicable

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	0	11	11
Gas	3	121	124
Dry	1	17	18
Service	-	0	0
Total	4	149	153

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	0.0	16.0	16.0
Gas	10.5	334.6	345.0
Dry	5.1	56.3	61.4
Service	-	0.0	0.0
Total	15.6	407.0	422.6

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	1
New-field wildcat footage (thous. ft.)	4.0

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	24th	13th
Production	28th	22nd
Reserves (1987)	N/A	21st

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	---	---	N/A
Production	---	---	N/A
Net annual change	---	---	N/A
Proved reserves	---	---	N/A

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	0	-24	-24
Production	0	23	23
Net annual change	0	-47	-47
Proved reserves	0	410	410

Cost of drilling and equipping wells: (Appalachia)

	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	121,480	3,757	25.38
Gas	291,583	4,128	31.99
Dry	13,807	3,148	24.78
Total	426,869	3,952	29.52

Seismic crew months worked	Less than 1
Average rotary rigs active	2

Number of producing wells: (12/31/88)

Crude oil	4,245
Flowing	3
Artificial lift	4,242
Natural gas	5,340
Total	9,585

Average production:	thous. bbls.	thous. b/d
Crude oil	566	2
NGL	N/A	N/A
Total	566	2

Natural gas marketed production (MMcf) 20,000

Average output per producing well:

Crude oil (bbls.)	133
Natural gas (Mc)	3,745

Average number of employees in:

Oil and gas extraction	1,729
Refining	5,835
Transportation	6,757
Wholesale	8,652
Retail	27,466
Total petroleum industry	50,439

Number of producing stripper wells	4,221
Number of stripper well abandonments	354

Stripper well crude oil production:

(bbls.)	511,295
(b/d)	1,400

Percentage of oil produced by stripper wells 77%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	6,849
Secondary	3,576
Total	10,425

Percentage of total value of principal mineral production:

Crude oil — ranked 6th	2%
Natural gas — ranked 5th	7%

State Energy Contact

New York State Department of
Environmental Conservation
50 Wolf Road
Albany, NY 12223
(518) 457-7480

NORTH DAKOTA



■ Counties with oil
and/or gas production

Background Information

Number of counties 53
With oil and/or gas production 16

First year of production:
Crude oil 1951
Natural gas 1907

Year and amount of peak production:
Crude oil — 52,652 thous. bbls. 1984
Natural gas — 72,633 MMcf 1985

Deepest producing well: (ft.)
Crude oil 15,380
Natural gas 14,636

Year and depth of deepest well drilled: (ft.)
1978 15,380

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	5,580	50%
Gas wells	96	1%
Dry holes	5,389	49%
Total	11,065	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) \$13,352,050

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	1,123	171	1,294	1,914
Production	908	104	1,012	1,336

Value of Oil and Gas

Average 1988 wellhead price:
Crude oil (\$/bbl.) \$13.86
Natural gas (\$/Mcf) \$.79

Wellhead value of 1988 production: (thous. \$)
Crude oil \$545,294
Natural gas \$45,463
Total \$590,757

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$5.17
Commercial consumers	\$4.51
Industrial consumers	\$3.45
Electric utilities	N/A
All consumers	\$4.73

Severance taxes paid in 1988 (thous. \$) \$72,215

1988 Industry Statistics

Number of wells drilled:			
	Exploratory	Development	Total
Oil	43	91	134
Gas	1	0	1
Dry	92	25	117
Service	--	1	1
Total	136	117	253

Total footage drilled:			
(thous. ft.)	Exploratory	Development	Total
Oil	364.5	771.7	1,136.2
Gas	14.2	0.0	14.2
Dry	710.2	198.8	909.1
Service	--	8.1	8.1
Total	1,088.9	978.6	2,067.6

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	75
New-field wildcat footage (thous. ft.)	588.9

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	12th	26th
Production	9th	19th
Reserves (1987)	9th	20th

Seismic crew months worked	35
Average rotary rigs active	15

Number of producing wells: (12/31/88)	
Crude oil	3,511
Flowing	592
Artificial lift	2,919
Natural gas	101
Total	3,612

Average production:	thous. bbls.	thous. b/d
Crude oil	39,343	107
NGL	6,000	16
Total	45,343	123

Natural gas marketed production (MMcf)	57,548
Average output per producing well:	
Crude oil (bbls.)	11,206
Natural gas (Mcf)	569,782

Average number of employees in:	
Oil and gas extraction	2,747
Refining	353
Transportation	1,180
Wholesale	2,185
Retail	2,346
Total petroleum industry	8,811

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:			
(mill. bbls.)	Crude Oil	NGL	Total
New reserves	35	5	40
Production	38	7	45
Net annual change	-3	-2	-5
Proved reserves	215	67	282

Natural gas reserve position as of 12/31/87:			
(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	34	-1	33
Production	51	14	65
Net annual change	-17	-15	-32
Proved reserves	276	302	578

Cost of drilling and equipping wells:			
	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	63,749	637,488	64.10
Gas	2,684	1,342,211	94.38
Dry	23,251	287,055	35.58
Total	89,685	490,080	53.50

Number of producing stripper wells	1,125
Number of stripper well abandonments	55

Stripper well crude oil production:	
(bbls.)	1,833,257
(b/d)	5,022
Percentage of oil produced by stripper wells	4%

Stripper oil reserves as of 12/31/87: (thous. bbls.)	
Primary	35,050
Secondary	28,883
Total	63,933

Percentage of total value of principal mineral production:	
Crude oil — ranked 1st	69%
Natural gas — ranked 3rd	8%

State Energy Contact

North Dakota Industrial Commission
Oil and Gas Division
900 East Boulevard
Bismarck, ND 58505
(701) 224-2969

OHIO



■ Counties with oil
and/or gas production

Background Information

Number of counties 88
With oil and/or gas production 68

First year of production:

Crude oil 1860
Natural gas 1884

Year and amount of peak production:

Crude oil — 23,941 thous. bbls. 1896
Natural gas — 166,593 MMcf 1987

Deepest producing well: (ft.)

Crude oil 7,805
Natural gas 8,488

Year and depth of deepest well drilled: (ft.)

1967 11,442

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	79,302	48%
Gas wells	48,347	29%
Dry holes	37,091	23%
Total	164,740	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$)\$5,589,313

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL	Total	Natural gas (Bcf)
	(mill. bbls.)			
Reserves	1,019	N/A	1,019	7,749
Production	953	N/A	953	6,678

Value of Oil and Gas

Average 1988 wellhead price:

Crude oil (\$/bbl.)\$15.19
Natural gas (\$/Mcf)\$2.55

Wellhead value of 1988 production: (thous. \$)

Crude oil\$177,890
Natural gas\$422,512
Total\$600,402

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers\$5.21
Commercial consumers\$4.75
Industrial consumers\$4.11
Electric utilities\$3.82
All consumers\$4.98

Severance taxes paid in 1988 (thous. \$)\$5,148

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	7	707	714
Gas	10	317	327
Dry	21	60	81
Service	--	2	2
Total	38	1,086	1,124

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	44.2	2,977.5	3,021.8
Gas	61.0	1,308.5	1,369.5
Dry	83.9	197.6	281.5
Service	--	1.5	1.5
Total	189.1	4,485.1	4,674.2

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 8
 New-field wildcat footage (thous. ft.) 27.1

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	5th	8th
Production	18th	10th
Reserves (1987)	16th	16th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	4	N/A	4
Production	10	N/A	10
Net annual change	-6	N/A	-6
Proved reserves	66	N/A	66

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	-232	0	-232
Production	72	45	117
Net annual change	-304	-45	-349
Proved reserves	594	477	1,071

Cost of drilling and equipping wells:

(Appalachia)	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	121,480	3,757	25.38
Gas	291,583	4,128	31.99
Dry	13,807	3,148	24.78
Total	426,869	3,952	29.52

Seismic crew months worked 0
 Average rotary rigs active 14

Number of producing wells: (12/31/88)

Crude oil	30,134
Flowing	389
Artificial lift	29,745
Natural gas	33,931
Total	64,065

Average production: thous. bbls. thous. b/d

Crude oil	11,711	32
NGL	N/A	N/A
Total	11,711	32

Natural gas marketed production (MMcf) 165,691

Average output per producing well:

Crude oil (bbls.)	389
Natural gas (Mcf)	4,883

Average number of employees in:

Oil and gas extraction	6,498
Refining	6,467
Transportation	8,117
Wholesale	6,837
Retail	31,874
Total petroleum industry	59,793

Number of producing stripper wells 28,908
 Number of stripper well abandonments 343

Stripper well crude oil production:

(bbls.)	8,828,840
(b/d)	24,188

Percentage of oil produced by stripper wells 73%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	75,298
Secondary	249
Total	75,547

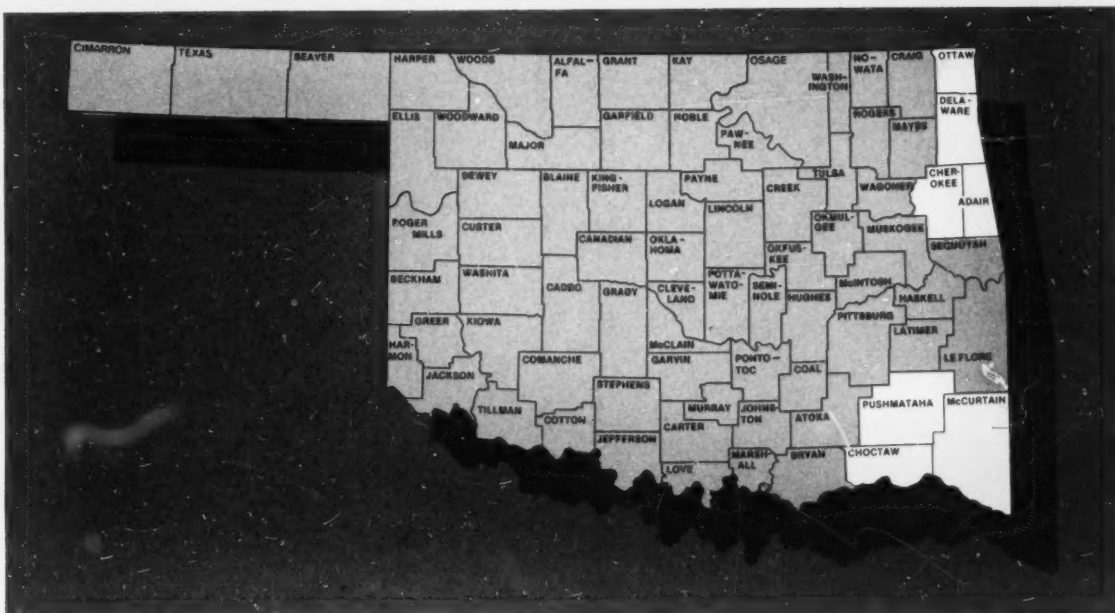
Percentage of total value of principal mineral production:

Crude oil — ranked 4th	8%
Natural gas — ranked 2nd	17%

State Energy Contact

Ohio Department of Natural Resources
 Division of Oil and Gas
 Fountain Square Bldg. A
 Columbus, OH 43224
 (614) 265-6917

OKLAHOMA



■ Counties with oil
and/or gas production

Background Information

Number of counties 77
With oil and/or gas production 70

First year of production:

Crude oil 1891
Natural gas 1902

Year and amount of peak production:

Crude oil — 277,775 thous. bbls. 1927
Natural gas — 2,019,199 MMcf 1981

Deepest producing well: (ft.)

Crude oil 22,850
Natural gas 24,969

Year and depth of deepest well drilled: (ft.)

1974..... 31,441

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	233,238	59%
Gas wells	46,589	12%
Dry holes	113,311	29%
Total	393,138	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) \$69,885,484

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL	Total	Natural
		(mill. bbls.)		gas (Bcf)
Reserves	13,729	3,739	17,468	82,643
Production	12,941	2,958	15,899	64,940

Value of Oil and Gas

Average 1988 wellhead price:

Crude oil (\$/bbl.) \$14.86
Natural gas (\$/Mcf) \$1.54

Wellhead value of 1988 production: (thous. \$)

Crude oil \$1,915,068
Natural gas \$3,095,345
Total \$5,010,413

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$4.47
Commercial consumers	\$4.15
Industrial consumers	\$1.73
Electric utilities	\$2.91
All consumers	\$3.16

Severance taxes paid in 1988 (thous. \$) \$392,637

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	31	1,164	1,195
Gas	25	871	896
Dry	174	789	963
Service	-	42	42
Total	230	2,866	3,096

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	205.5	5,514.5	5,720.0
Gas	194.9	6,319.0	6,513.9
Dry	1,005.3	4,200.8	5,206.1
Service	-	88.3	88.3
Total	1,405.7	16,122.6	17,528.4

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 102
 New-field wildcat footage (thous. ft.) 563.7

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	3rd	2nd
Production	5th	3rd
Reserves (1987)	5th	4th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	37	11	48
Production	123	87	210
Net annual change	-86	-76	162
Proved reserves	788	781	1,569

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	189	1,656	1,845
Production	363	1,558	1,921
Net annual change	-174	98	-76
Proved reserves	2,017	15,686	17,703

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	342,027	216,473	46.99
Gas	433,318	447,643	66.63
Dry	224,297	213,820	39.39
Total	999,642	277,910	51.33

Seismic crew months worked 152
 Average rotary rigs active 126

Number of producing wells: (12/31/88)

Crude oil	97,685
Flowing	4,886
Artificial lift	92,799
Natural gas	27,307
Total	124,992

Average production:	thous. bbls.	thous. b/d
Crude oil	128,874	352
NGL	67,000	184
Total	195,874	536

Natural gas marketed production (MMcf) 2,009,964

Average output per producing well:

Crude oil (bbls.)	1,319
Natural gas (Mcf)	73,606

Average number of employees in:

Oil and gas extraction	42,251
Refining	6,948
Transportation	6,619
Wholesale	4,688
Retail	7,647
Total petroleum industry	68,153

Number of producing stripper wells 77,154
 Number of stripper well abandonments 1,779

Stripper well crude oil production:

(bbls.)	109,081,620
(b/d)	298,853
Percentage of oil produced by stripper wells	88%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	198,550
Secondary	210,820
Total	409,370

Percentage of total value of principal mineral production:

Crude oil — ranked 2nd	42%
Natural gas — ranked 1st	52%

State Energy Contact

Oklahoma Corporation Commission
 Oil and Gas Division
 Jim Thorpe Building
 Oklahoma City, OK 73105
 (405) 521-2301

OREGON



■ Counties with oil and/or gas production

Background Information

Number of counties 36
With oil and/or gas production 1

First year of production:
Crude oil Not Applicable
Natural gas 1979

Year and amount of peak production:
Crude oil Not Applicable
Natural gas — 5,000 MMcf 1980/1981

Deepest producing well: (ft.)
Crude oil Not Applicable
Natural gas 3,027

Year and depth of deepest well drilled: (ft.)
1979 13,177

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	0	0%
Gas wells	30	9%
Dry holes	306	91%
Total	336	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) Not Applicable

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	0	N/A	0	40
Production	0	N/A	0	19

Value of Oil and Gas

Average 1988 wellhead price:
Crude oil (\$/bbl.) Not Applicable
Natural gas (\$/Mcf) \$1.55

Wellhead value of 1988 production: (thous. \$)
Crude oil \$0
Natural gas \$5,425
Total \$5,425

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$6.71
Commercial consumers	\$5.47
Industrial consumers	\$3.74
Electric utilities	N/A
All consumers	\$5.51

Severance taxes paid in 1988 (thous. \$) \$139

1988 Industry Statistics

Number of wells drilled:			
	Exploratory	Development	Total
Oil	0	0	0
Gas	3	4	7
Dry	8	0	8
Service	--	3	3
Total	11	7	18

Total footage drilled:			
(thous. ft.)	Exploratory	Development	Total
Oil	0.0	0.0	0.0
Gas	7.7	8.6	16.3
Dry	29.4	0.0	29.4
Service	--	7.0	7.0
Total	37.0	15.6	52.6

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	5
New-field wildcat footage (thous. ft.)	21.1

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	--	23rd
Production	--	25th
Reserves (1987)	--	N/A

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:			
(mill. bbls.)	Crude Oil	NGL	Total
New reserves	0	0	0
Production	0	0	0
Net annual change	0	0	0
Proved reserves	0	0	0

Natural gas reserve position as of 12/31/87:			
(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	---	---	N/A
Production	---	---	N/A
Net annual change	---	---	N/A
Proved reserves	---	---	N/A

Cost of drilling and equipping wells:			
	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	N/A	---	---
Gas	N/A	---	---
Dry	N/A	---	---
Total	N/A	---	---

Seismic crew months worked	8
Average rotary rigs active	1

Number of producing wells: (12/31/88)	
Crude oil	0
Flowing	0
Artificial lift	0
Natural gas	N/A
Total	0

Average production:	thous. bbls.	thous. b/d
Crude oil	0	0
NGL	0	0
Total	0	0

Natural gas marketed production (MMcf)	3,500
Average output per producing well:	
Crude oil (bbls.)	0
Natural gas (Mcf)	0

Average number of employees in:	
Oil and gas extraction	64
Refining	88
Transportation	20
Wholesale	2,638
Retail	9,148
Total petroleum industry	11,958

Number of producing stripper wells	0
Number of stripper well abandonments	0

Stripper well crude oil production:	
(bbls.)	0
(b/d)	0
Percentage of oil produced by stripper wells	0

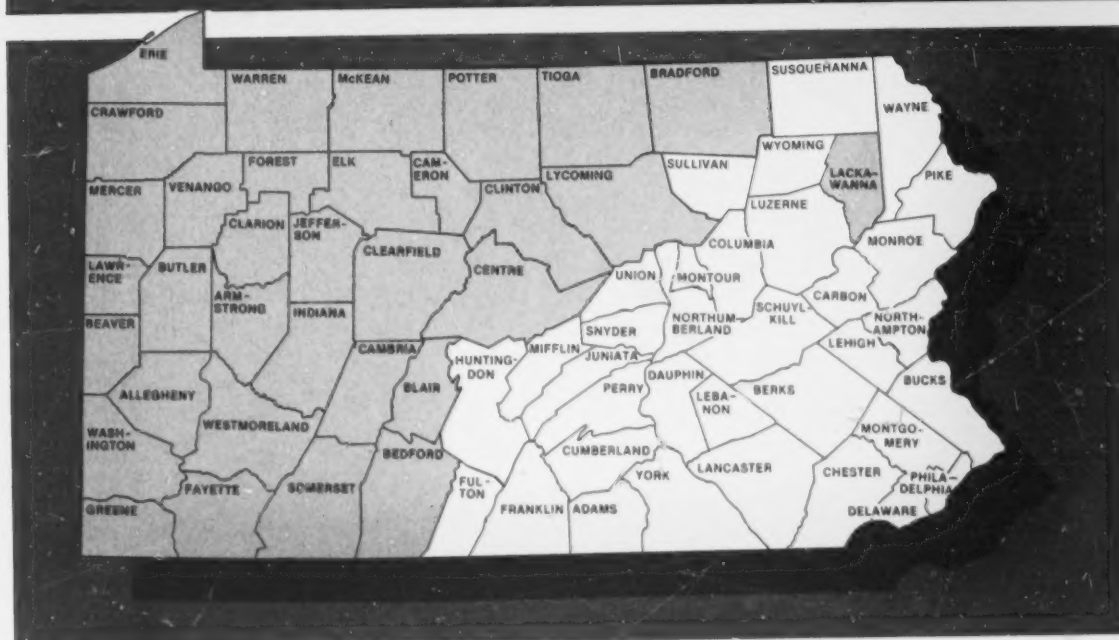
Stripper oil reserves as of 12/31/87: (thous. bbls.)	
Primary	0
Secondary	0
Total	0

Percentage of total value of principal mineral production:	
Crude oil	Not Applicable
Natural gas — ranked 4th	3%

State Energy Contact

Oregon Department of Geology and Mineral Industries
910 State Office Building
Portland, OR 97201
(503) 229-5580

PENNSYLVANIA



■ Counties with oil
and/or gas production

Background Information

Number of counties 67
With oil and/or gas production 33

First year of production:
Crude oil 1859
Natural gas 1881

Year and amount of peak production:
Crude oil — 31,424 thous. bbls. 1891
Natural gas — 166,342 MMcf 1984

Deepest producing well: (ft.)
Crude oil 8,484
Natural gas 19,365

Year and depth of deepest well drilled: (ft.)
1974 21,640

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	250,092	78%
Gas wells	32,613	10%
Dry holes	38,550	12%
Total	321,255	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$) \$4,083,726

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	1,345	N/A	1,345	116,621
Production	1,319	N/A	1,319	10,206

Value of Oil and Gas

Average 1988 wellhead price:
Crude oil (\$/bbl.) \$15.26
Natural gas (\$/Mcf) \$2.30

Wellhead value of 1988 production: (thous. \$)
Crude oil \$43,186
Natural gas \$379,500
Total \$422,686

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$5.83
Commercial consumers	\$5.12
Industrial consumers	\$3.63
Electric utilities	\$3.42
All consumers	\$5.25

Severance taxes paid in 1988 Not Applicable

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	0	11	11
Gas	14	708	722
Dry	23	19	42
Service	-	0	0
Total	37	738	775

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	0	26.6	26.6
Gas	99.2	3,163.9	3,263.0
Dry	140.1	71.6	211.7
Service	-	0.0	0.0
Total	239.3	3,262.1	3,501.3

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 17
 New-field wildcat footage (thous. ft.) 100.5

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	24th	3rd
Production	24th	11th
Reserves (1987)	21st	13th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	2	N/A	2
Production	2	N/A	2
Net annual change	0	N/A	0
Proved reserves	26	N/A	26

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	1	215	216
Production	2	126	128
Net annual change	-1	89	88
Proved reserves	21	1,629	1,650

Cost of drilling and equipping wells:

(Appalachia)	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	121,480	3,757	25.38
Gas	291,583	4,128	31.99
Dry	13,807	3,148	24.78
Total	426,869	3,952	29.52

Seismic crew months worked 3
 Average rotary rigs active 19

Number of producing wells: (12/31/88)

Crude oil	13,255
Flowing	0
Artificial lift	13,255
Natural gas	28,000
Total	41,255

Average production:	thous. bbls.	thous. b/d
Crude oil	2,830	8
NGL	N/A	N/A
Total	2,830	8

Natural gas marketed production (MMcf) 165,000

Average output per producing well:

Crude oil (bbls.)	214
Natural gas (Mcf)	5,892

Average number of employees in:

Oil and gas extraction	3,800
Refining	9,000
Transportation	9,000
Wholesale	10,100
Retail	27,700
Total petroleum industry	59,600

Number of producing stripper wells 13,255
 Number of stripper well abandonments 996

Stripper well crude oil production:

(bbls.)	2,870,144
(b/d)	7,863

Percentage of oil produced by stripper wells 87%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	20,310
Secondary	25,611
Total	45,921

Percentage of total value of principal mineral production:

Crude oil — ranked 7th	2%
Natural gas — ranked 3rd	10%

State Energy Contact

Pennsylvania Dept. of Environmental Resources
 Oil and Gas Division
 P.O. Box 2063
 Harrisburg, PA 17120
 (717) 787-2814

A map of North Dakota showing its county boundaries and names. The county of Dewey is shaded in gray. The counties are arranged as follows:

- North Row:** Harding, Perkins, Corson, Campbell, McPherson, Brown, Marshall, Roberts.
- Second Row:** Butte, Meade, Ziebach, Dewey, Walworth, Edmunds, Spink, Day, Grant.
- Third Row:** Potter, Faulk, Clark, Codington, Deuel.
- Fourth Row:** Sully, Hyde, Hand, Hamlin.
- Fifth Row:** Stanley, Hughes, Beadle, Kingsbury, Brooking.
- Sixth Row:** Haakon, Jones, Lyman, Buffalo, Jerauld, Sanborn, Miner, Lake, Moody.
- Seventh Row:** Lawrence, Pennington, Jackson, Brule, Aurora, Davison, Hanson, McCook, Minnehaha.
- Eighth Row:** Custer, Shannon, Washabaugh, Mellette, Troup, Charles Mix, Douglas, Hutchinson, Turner.
- Ninth Row:** Fall River, Bennett, Todd, Gregory, Bon Homme, Yankton, Lincoln, Union.
- Tenth Row:** Clay.

Background Information

Value of Oil and Gas

Compiled by IPAA-September 1989

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	2	1	3
Gas	1	3	4
Dry	6	1	7
Service	-	0	0
Total	9	5	14

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	5.5	8.7	14.2
Gas	1.2	4.3	5.5
Dry	22.2	2.8	25.1
Service	-	0.0	0.0
Total	28.9	15.8	44.7

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	7
New-field wildcat footage (thous. ft.)	24.8

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	26th	24th
Production	26th	24th
Reserves (1987)	N/A	N/A

Seismic crew months worked	0
Average rotary rigs active	1

Number of producing wells: (12/31/88)

Crude oil	151
Flowing	0
Artificial lift	151
Natural gas	52
Total	203

Average production:	thous. bbls.	thous. b/d
Crude oil	1,657	5
NGL	0	0
Total	1,657	5

Natural gas marketed production (MMcf) 3,500

Average output per producing well:

Crude oil (bbls.)	10,974
Natural gas (Mcf)	67,307

Average number of employees in:

Oil and gas extraction	111
Refining	0
Transportation	194
Wholesale	1,574
Retail	2,709
Total petroleum industry	4,588

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	N/A	0	0
Production	N/A	0	0
Net annual change	N/A	0	0
Proved reserves	N/A	0	0

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	-	-	N/A
Production	-	-	N/A
Net annual change	-	-	N/A
Proved reserves	-	-	N/A

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	N/A	-	-
Gas	N/A	-	-
Dry	N/A	-	-
Total	N/A	-	-

Number of producing stripper wells	27
Number of stripper well abandonments	1

Stripper well crude oil production:

(bbls.)	57,436
(b/d)	157

Percentage of oil produced by stripper wells 3%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	193
Secondary	200
Total	393

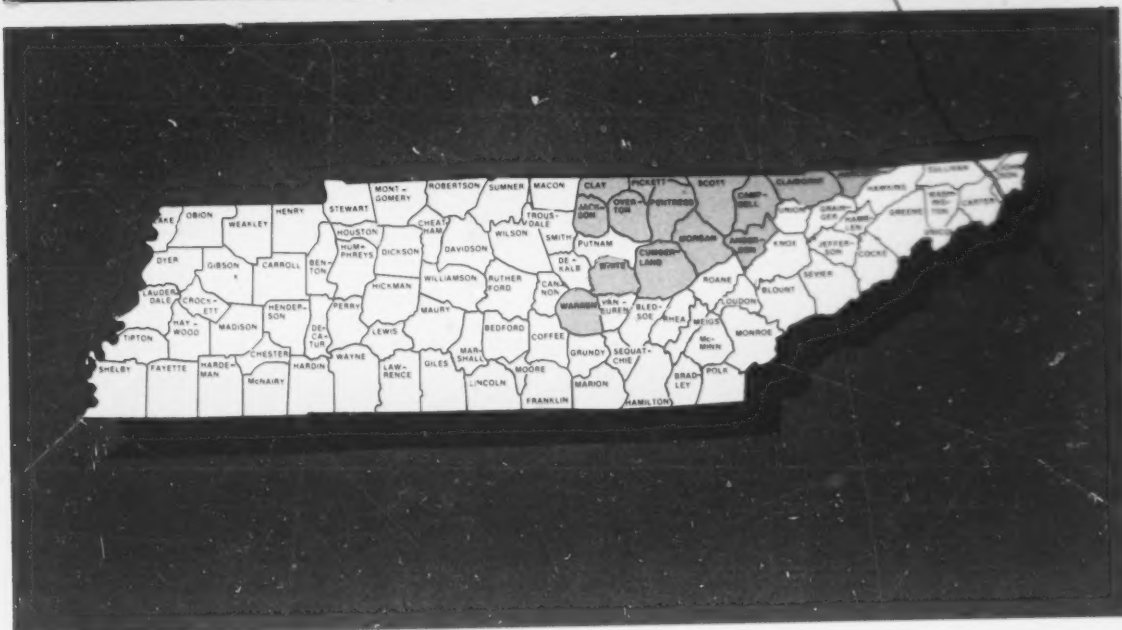
Percentage of total value of principal mineral production:

Crude oil — ranked 2nd	9%
Natural gas — ranked 6th	3%

State Energy Contact

South Dakota Geological Survey
University of South Dakota Science Center
Vermillion, SD 57069
(605) 677-5227

TENNESSEE



■ Counties with oil
and/or gas production

Background Information

Number of counties	95	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)	
With oil and/or gas production	14	Oil wells	1,681 27%
First year of production:		Gas wells	1,635 26%
Crude oil	1860	Dry holes	2,870 47%
Natural gas	1889	Total	6,186 100%
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)	\$271,508
Crude oil — 1,132 thous. bbls.	1982	Cumulative production & new reserves as of 12/31/87: (latest available data)	
Natural gas — 5,022 MMcf	1984	Crude oil	N/A
Deepest producing well: (ft.)		NGL	N/A
Crude oil	10,141	(mill. bbls.)	
Natural gas	4,624	Total	---
Year and depth of deepest well drilled: (ft.)		Natural gas (Bcf)	N/A
1982	11,540	Reserves	N/A
		Production	N/A

Value of Oil and Gas

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$13.99	Residential consumers	\$4.63
Natural gas (\$/Mcf)	\$1.44	Commercial consumers	\$4.30
Wellhead value of 1988 production: (thous. \$)		Industrial consumers	\$3.18
Crude oil	\$8,408	Electric utilities	N/A
Natural gas	\$4,320	All consumers	\$3.91
Total	\$12,728	Severance taxes paid in 1988 (thous. \$)	\$343

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	1	29	30
Gas	2	28	30
Dry	5	12	17
Service	-	0	0
Total	8	69	77

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	2.5	40.9	43.4
Gas	3.3	45.3	48.6
Dry	8.3	21.5	29.8
Service	-	0.0	0.0
Total	14.0	107.7	121.8

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	7
New-field wildcat footage (thous. ft.)	11.9

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	22nd	18th
Production	27th	26th
Reserves (1987)	N/A	N/A

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	N/A	N/A	-
Production	N/A	N/A	-
Net annual change	N/A	N/A	-
Proved reserves	N/A	N/A	-

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	-	-	N/A
Production	-	-	N/A
Net annual change	-	-	N/A
Proved reserves	-	-	N/A

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	N/A	-	-
Gas	N/A	-	-
Dry	N/A	-	-
Total	N/A	-	-

Seismic crew months worked	Less than 1%
Average rotary rigs active	0

Number of producing wells: (12/31/88)

Crude oil	720
Flowing	0
Artificial lift	720
Natural gas	764
Total	1,484

Average production:	thous. bbls.	thous. b/d
Crude oil	601	2
NGL	N/A	N/A
Total	601	2

Natural gas marketed production (MMcf)

Average output per producing well:	3,000
Crude oil (bbls.)	835
Natural gas (Mcf)	3,926

Average number of employees in:

Oil and gas extraction	332
Refining	446
Transportation	1,849
Wholesale	5,420
Retail	11,616
Total petroleum industry	19,663

Number of producing stripper wells	853
Number of stripper well abandonments	110

Stripper well crude oil production:

(bbls.)	444,808
(b/d)	1,218
Percentage of oil produced by stripper wells	73%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	484
Secondary	121
Total	605

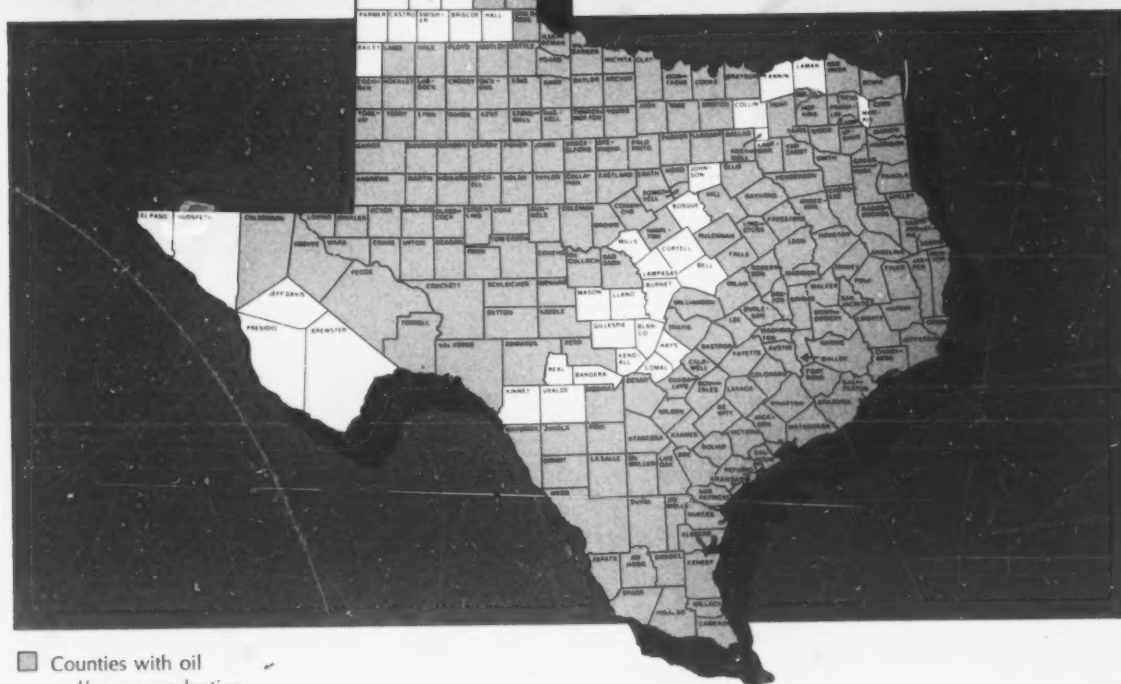
Percentage of total value of principal mineral production:

Crude oil — ranked 7th	1%
Natural gas — ranked 8th	Less than 1%

State Energy Contact

Tennessee Department of Conservation
Oil and Gas Division
701 Broadway Street
Nashville, TN 37203
(615) 742-6694

TEXAS



Background Information

Number of counties	254
With oil and/or gas production	217

First year of production:	
Crude oil	1889
Natural gas	1889

Year and amount of peak production:	
Crude oil — 1,301,685 thous. bbls.	1972
Natural gas — 8,657,840 MMcf	1972

Deepest producing well: (ft.)	
Crude oil	28,500
Natural gas	26,536

Year and depth of deepest well drilled: (ft.)	
1982	29,670

Cumulative number of total wells drilled as of 12/31/88:
(excluding service wells)

Oil wells	504,161	58%
Gas wells	77,940	9%
Dry holes	281,334	33%
Total	863,435	100%

Cumulative crude oil wellhead value as of 12/31/88:
(thous. \$)

Cumulative production & new reserves as of 12/31/87:
(latest available data)

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	66,141	14,620	80,761	322,795
Production	58,941	11,710	70,651	273,841

Value of Oil and Gas

Average 1988 wellhead price:	
Crude oil (\$/bbl.)	\$14.71
Natural gas (\$/Mcf)	\$1.51

Wellhead value of 1988 production: (thous. \$)	
Crude oil	\$11,221,082
Natural gas	\$9,379,090
Total	\$20,600,172

Average 1988 natural gas price to: (\$/Mcf)

Residential consumers	\$5.56
Commercial consumers	\$4.37
Industrial consumers	\$2.23
Electric utilities	\$2.15
All consumers	\$2.73

Severance taxes paid in 1988 (thous. \$)

\$ 1,055,563

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	228	4,464	4,692
Gas	315	1,312	1,626
Dry	1,417	1,568	2,985
Service	--	415	415
Total	1,960	7,758	9,718

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	1,528.9	21,864.3	23,393.2
Gas	2,538.9	9,640.8	12,179.7
Dry	8,914.6	7,075.6	15,990.2
Service	--	1,813.9	1,813.9
Total	12,982.4	40,394.6	53,377.0

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	716
New-field wildcat footage (thous. ft.)	5,342.5

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	1st	1st
Production	1st	1st
Reserves (1987)	1st	1st

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	688	163	851
Production	741	316	1,057
Net annual change	-53	-153	-206
Proved reserves	7,200	2,911	10,111

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	655	2,575	3,230
Production	1,069	5,023	6,092
Net annual change	-414	-2,448	-2,862
Proved reserves	9,862	39,591	49,453

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	1,142,585	210,460	44.13
Gas	970,849	612,137	82.97
Dry	749,548	207,977	41.39
Total	2,862,982	269,609	51.40

Seismic crew months worked	388
Average rotary rigs active	281

Number of producing wells: (12/31/88)

Crude oil	198,008
Flowing	13,253
Artificial lift	184,755
Natural gas	45,984
Total	243,992

Average production:	thous. bbls.	thous. b/d
Crude oil	735,495	2,010
NGL	246,000	674
Total	981,495	2,684

Natural gas marketed production (MMcf) 6,211,318

Average output per producing well:

Crude oil (bbls.)	3,714
Natural gas (Mcf)	135,075

Average number of employees in:

Oil and gas extraction	174,959
Refining	27,404
Transportation	32,316
Wholesale	22,765
Retail	33,702
Total petroleum industry	291,146

Number of producing stripper wells	123,945
Number of stripper well abandonments	6,708

Stripper well crude oil production:

(bbls.)	141,704,314
(b/d)	388,320

Percentage of oil produced by stripper wells 20%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

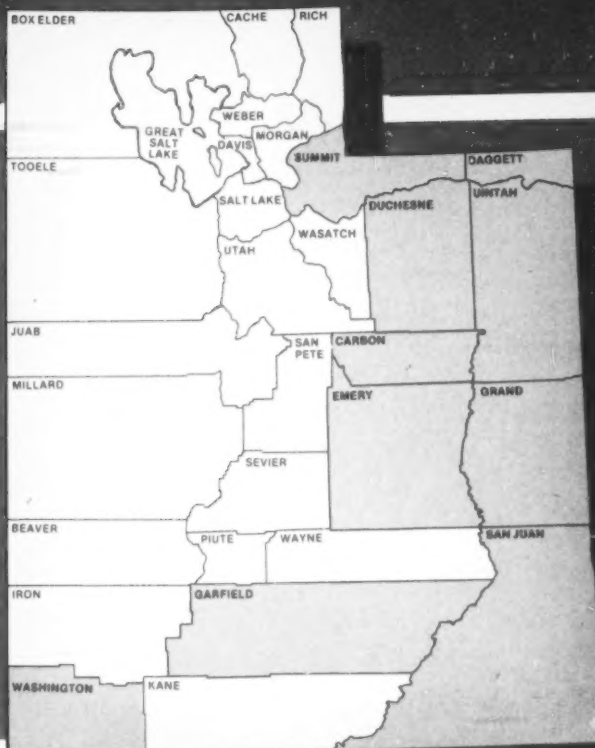
Primary	938,890
Secondary	977,210
Total	1,916,100

Percentage of total value of principal mineral production:

Crude oil — ranked 1st	55%
Natural gas — ranked 2nd	37%

State Energy Contact

Texas Railroad Commission
Office of Information Services
P.O. Drawer 12967
Austin, TX 78711
(512) 463-6710



■ Counties with oil
and/or gas production

Background Information

Number of counties	29	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)		
With oil and/or gas production	10	Oil wells	3,483	41%
First year of production:		Gas wells	1,379	16%
Crude oil	1907	Dry holes	3,710	43%
Natural gas	1886	Total	8,572	100%
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)	\$9,975,436	
Crude oil — 42,301 thous. bbls.	1975	Cumulative production & new reserves as of 12/31/87: (latest available data)		
Natural gas — 94,255 MMcf	1982	Crude oil		
Deepest producing well: (ft.)		NGL		
Crude oil	17,732	(mill. bbls.)		
Natural gas	19,500	Total		
Year and depth of deepest well drilled: (ft.)		Natural gas (Bcf)		
1982	21,874	Reserves	1,146	507
		Production	862	117
			1,653	979
			4,338	1,996

Value of Oil and Gas

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$14.25	Residential consumers	\$5.10
Natural gas (\$/Mcf)	\$1.72	Commercial consumers	\$4.09
Wellhead value of 1988 production: (thous. \$)		Industrial consumers	\$3.14
Crude oil	\$470,507	Electric utilities	N/A
Natural gas	\$184,141	All consumers	\$4.48
Total	\$654,648	Severance taxes paid in 1988 (thous. \$)	\$30,981

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	10	50	60
Gas	6	18	24
Dry	25	15	40
Service	- -	2	2
Total	41	85	126

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	68.9	320.4	389.3
Gas	41.5	89.7	131.2
Dry	150.7	57.5	208.1
Service	- -	6.6	6.6
Total	261.1	474.2	735.2

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 33
 New-field wildcat footage (thous. ft.) 214.9

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	18th	20th
Production	10th	17th
Reserves (1987)	13th	11th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	35	18	53
Production	20	9	29
Net annual change	15	9	24
Proved reserves	284	235	519

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	97	111	208
Production	36	36	72
Net annual change	61	75	136
Proved reserves	471	1,870	2,341

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/ well(\$)	Cost/ ft. (\$)
Oil	29,157	583,138	88.60
Gas	19,036	865,254	118.49
Dry	9,626	223,851	47.87
Total	57,818	502,766	83.69

Seismic crew months worked 12
 Average rotary rigs active 6

Number of producing wells: (12/31/88)

Crude oil	1,849
Flowing	343
Artificial lift	1,506
Natural gas	460
Total	2,309

Average production:	thous. bbls.	thous. b/d
Crude oil	33,018	90
NGL	8,000	22
Total	41,018	112

Natural gas marketed production (MMcf) 107,059

Average output per producing well:

Crude oil (bbls.)	17,857
Natural gas (Mcf)	232,736

Average number of employees in:

Oil and gas extraction	2,023
Refining	812
Transportation	2,356
Wholesale	1,125
Retail	5,562
Total petroleum industry	11,878

Number of producing stripper wells 824
 Number of stripper well abandonments 93

Stripper well crude oil production:

(bbls.)	935,405
(b/d)	2,562
Percentage of oil produced by stripper wells	3%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	11,864
Secondary	10,216
Total	22,080

Percentage of total value of principal mineral production:

Crude oil — ranked 1st	32%
Natural gas — ranked 4th	9%

State Energy Contact

Department of Natural Resources
 Division of Oil, Gas and Mining
 3 Triad Center, Suite 350
 Salt Lake City, UT 84180
 (801) 538-5340

[illegible]

Background Information

	Crude oil	NGL (mill. bbls.)	Total	Natural gas (Bcf)
Reserves	N/A	0	0	N/A
Production	N/A	0	0	N/A

Severance taxes paid in 1988 Not Applicable

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	1	0	1
Gas	2	20	22
Dry	1	1	2
Service	-	0	0
Total	4	21	25

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	2.4	0.0	2.4
Gas	11.5	95.5	107.1
Dry	5.7	2.7	8.4
Service	-	0.0	0.0
Total	19.6	98.2	117.8

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 4
 New-field wildcat footage (thous. ft.) 19.6

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	28th	21st
Production	31st	21st
Reserves (1987)	N/A	22nd

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	N/A	0	0
Production	N/A	0	0
Net annual change	N/A	0	0
Proved reserves	N/A	0	0

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	0	14	14
Production	0	19	19
Net annual change	0	-5	-5
Proved reserves	0	248	248

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/ well (\$)	Cost/ ft. (\$)
Oil	N/A	-	-
Gas	N/A	-	-
Dry	N/A	-	-
Total	N/A	-	-

Seismic crew months worked 3
 Average rotary rigs active 2

Number of producing wells: (12/31/88)

Crude oil	29
Flowing	1
Artificial lift	28
Natural gas	710
Total	739

Average production:	thous. bbls.	thous. b/d
Crude oil	25	-
NGL	0	-
Total	25	-

Natural gas marketed production (MMcf) 25,000
 Average output per producing well:
 Crude oil (bbls.) 862
 Natural gas (Mcf) 35,211

Average number of employees in:

Oil and gas extraction	301
Refining	322
Transportation	3,114
Wholesale	8,417
Retail	15,598
Total petroleum industry	27,752

Number of producing stripper wells 51
 Number of stripper well abandonments 1

Stripper well crude oil production:
 (bbls.) 15,928
 (b/d) 43
 Percentage of oil produced by stripper wells 94%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	67
Secondary	8
Total	75

Percentage of total value of principal mineral production:
 Crude oil — ranked 9th Less than 1%
 Natural gas — ranked 5th 2%

State Energy Contact

Virginia Energy Department
 Office of Oil and Gas
 P.O. Box 1197
 Richmond, VA 23209
 (804) 786-3611

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Background Information

Number of counties	55	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)			
With oil and/or gas production	49	Oil wells	47,908	42%	
First year of production:		Gas wells	47,184	41%	
Crude oil	1860	Dry holes	19,588	17%	
Natural gas	1885	Total	114,680	100%	
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)			\$2,130,040
Crude oil — 16,196 thous. bbls.	1900				
Natural gas — 242,452 MMcf	1970				
Deepest producing well: (ft.)		Cumulative production & new reserves as of 12/31/87: (latest available data)			
Crude oil	6,785	Crude oil		NGL	Total
Natural gas	14,300			(mill. bbls.)	Natural gas (Bcf)
Year and depth of deepest well drilled: (ft.)		Reserves	585	366	951
1974	20,222	Production	551	279	830
					16,442

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$14.35	Residential consumers	\$5.54
Natural gas (\$/Mcf)	\$3.05	Commercial consumers	\$5.30
		Industrial consumers	\$3.03
Wellhead value of 1988 production: (thous. \$)		Electric utilities	\$3.86
Crude oil	\$37,611	All consumers	\$5.20
Natural gas	\$480,070		
Total	\$517,681	Severance taxes paid in 1988 (thous. \$)	\$29,553

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	0	54	54
Gas	6	568	574
Dry	4	5	9
Service	-	0	0
Total	10	627	637

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	0.0	160.3	160.3
Gas	29.7	2,446.2	2,476.0
Dry	18.6	24.3	42.9
Service	-	0.0	0.0
Total	48.4	2,630.8	2,679.1

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled	3
New-field wildcat footage (thous. ft.)	21.0

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	19th	5th
Production	25th	12th
Reserves (1987)	20th	10th

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	0	6	6
Production	3	6	9
Net annual change	-3	0	-3
Proved reserves	34	87	121

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	99	165	264
Production	14	162	176
Net annual change	85	3	88
Proved reserves	150	2,210	2,360

Cost of drilling and equipping wells:

(Appalachia)	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	N/A	-	-
Gas	N/A	-	-
Dry	N/A	-	-
Total	N/A	-	-

Seismic crew months worked	2
Average rotary rigs active	13

Number of producing wells: (12/31/88)

Crude oil	15,950
Flowing	0
Artificial lift	15,950
Natural gas	34,650
Total	50,600

Average production:	thous. bbls.	thous. b/d
Crude oil	2,621	7
NGL	5,000	14
Total	7,621	21

Natural gas marketed production (MMcf) 157,400

Average output per producing well:

Crude oil (bbls.)	164
Natural gas (Mcf)	4,542

Average number of employees in:

Oil and gas extraction	4,336
Refining	584
Transportation	4,928
Wholesale	1,431
Retail	5,052
Total petroleum industry	16,331

Number of producing stripper wells	15,925
Number of stripper well abandonments	38

Stripper well crude oil production:

(bbls.)	2,765,232
(b/d)	7,575

Percentage of oil produced by stripper wells 100%

Stripper oil reserves as of 12/31/87: (thous. bbls.)

Primary	14,051
Secondary	21,076
Total	35,127

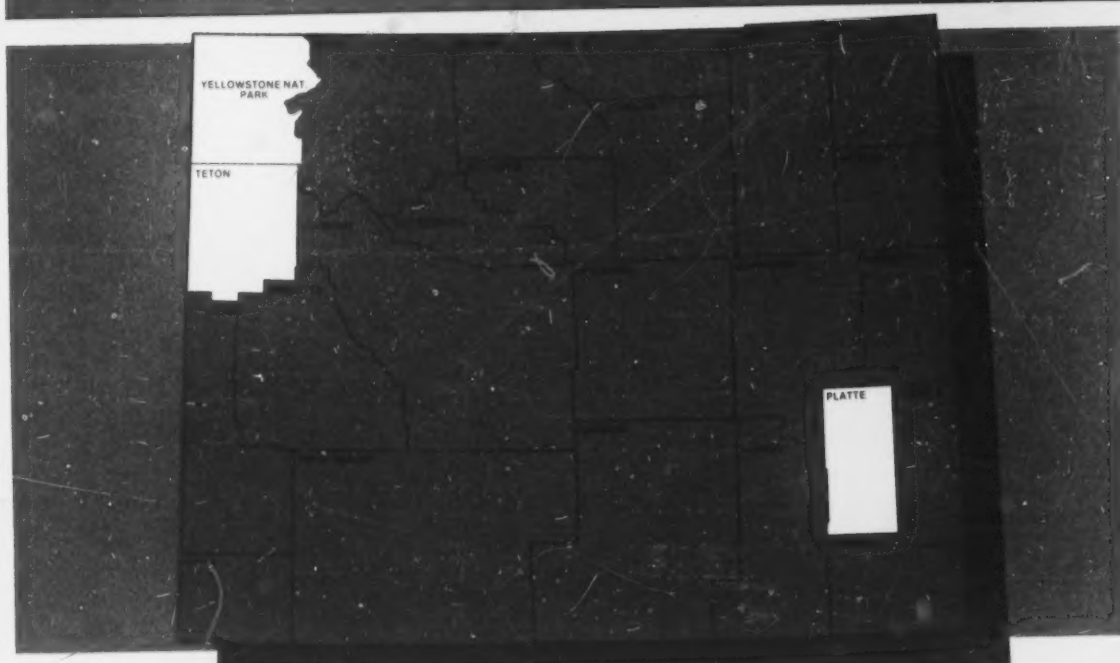
Percentage of total value of principal mineral production:

Crude oil — ranked 5th	1%
Natural gas — ranked 2nd	13%

State Energy Contact

West Virginia Department of Mines
Oil and Gas Division
1615 Washington Street, East
Charleston, WV 25311
(304) 348-3500

WYOMING



■ Counties with oil
and/or gas production

Background Information

Number of counties	23	Cumulative number of total wells drilled as of 12/31/88: (excluding service wells)			
With oil and/or gas production	20	Oil wells	26,583	51%	
First year of production:		Gas wells	3,734	7%	
Crude oil	1867	Dry holes	21,726	42%	
Natural gas	1889	Total	52,043	100%	
Year and amount of peak production:		Cumulative crude oil wellhead value as of 12/31/88: (thous. \$)			
Crude oil — 160,345 thous. bbls.	1970	\$41,612,657			
Natural gas — 516,683 MMcf	1984	Cumulative production & new reserves as of 12/31/87: (latest available data)			
Deepest producing well: (ft.)		Crude oil	NGL	Total	Natural gas (Bcf)
Crude oil	19,612		(mill. bbls.)		
Natural gas	24,877	Reserves	6,208	961	7,169
Year and depth of deepest well drilled: (ft.)		Production	5,366	472	5,838
1979	25,764				23,499
					12,748

Value of Oil and Gas

Average 1988 wellhead price:		Average 1988 natural gas price to: (\$/Mcf)	
Crude oil (\$/bbl.)	\$13.47	Residential consumers	\$4.73
Natural gas (\$/Mcf)	\$1.41	Commercial consumers	\$4.36
Wellhead value of 1988 production: (thous. \$)		Industrial consumers	\$3.51
Crude oil	\$1,535,378	Electric utilities	\$3.78
Natural gas	\$721,449	All consumers	\$4.44
Total	\$2,256,827	Severance taxes paid in 1988 (thous. \$)	\$133,836

1988 Industry Statistics

Number of wells drilled:

	Exploratory	Development	Total
Oil	48	215	263
Gas	10	61	71
Dry	260	101	361
Service	--	16	16
Total	318	393	711

Total footage drilled:

(thous. ft.)	Exploratory	Development	Total
Oil	453.2	1,225.4	1,678.6
Gas	95.6	422.1	517.7
Dry	2,109.4	787.0	2,896.4
Service	--	103.5	103.5
Total	2,658.3	2,538.0	5,196.3

(Note: Totals may not add due to rounding.)

Number of new-field wildcats drilled 266
New-field wildcat footage (thous. ft.) 2,193.4

State-wide rank in:	Crude Oil	Natural Gas
Wells drilled	9th	16th
Production	6th	5th
Reserves (1987)	6th	7th

Seismic crew months worked 98
Average rotary rigs active 37

Number of producing wells: (12/31/88)

Crude oil	11,850
Flowing	805
Artificial lift	11,045
Natural gas	2,147
Total	13,997

Average production:	thous. bbls.	thous. b/d
Crude oil	113,985	311
NGL	38,000	104
Total	151,985	415

Natural gas marketed production (MMcf) 511,666
Average output per producing well:

Crude oil (bbls.)	9,619
Natural gas (Mcf)	238,316

Average number of employees in:

Oil and gas extraction	9,191
Refining	929
Transportation	1,278
Wholesale	995
Retail	3,027
Total petroleum industry	15,420

1987 Latest Available Data

Petroleum reserve position as of 12/31/87:

(mill. bbls.)	Crude Oil	NGL	Total
New reserves	108	12	120
Production	103	47	150
Net annual change	5	-35	-30
Proved reserves	854	689	1,543

Natural gas reserve position as of 12/31/87:

(Bcf)	Associated dissolved	Non-associated	Total gas
New reserves	96	564	660
Production	96	385	481
Net annual change	0	179	179
Proved reserves	691	9,881	10,572

Cost of drilling and equipping wells:

	Total cost (thous. \$)	Cost/well (\$)	Cost/ft. (\$)
Oil	99,882	301,758	58.49
Gas	32,753	555,142	70.68
Dry	99,566	272,784	34.83
Total	232,201	307,552	46.17

Number of producing stripper wells 3,486
Number of stripper well abandonments 510
Stripper well crude oil production:
(bbls.) 6,963,194
(b/d) 19,077
Percentage of oil produced by stripper wells 6%

Stripper oil reserves as of 12/31/87: (thous. bbls.)
Primary 91,430
Secondary 65,930
Total 157,360

Percentage of total value of principal mineral production:
Crude oil — ranked 1st 39%
Natural gas — ranked 3rd 18%

State Energy Contact

Wyoming Oil and Gas Conservation Commission
777 West First Street
P.O. Box 2640
Casper, WY 82602
(307) 234-7147

Exploration

Seismic Exploration Activity

(crew months)	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	50	126	156	116	105	157	78	16	18	23
Alaska	30	37	82	129	58	79	48	16	5	22
Arizona	54	35	33	9	4	7	4	5	1	0
Arkansas	35	37	67	117	117	40	57	12	1	7
California	122	157	192	221	186	152	149	125	113	86
Colorado	58	87	56	141	176	208	131	84	109	58
Florida	17	21	42	20	37	10	18	6	8	22
Illinois	10	5	9	16	11	13	11	1	0	2
Indiana	0	6	0	1	3	13	3	0	1	5
Kansas	88	76	65	98	75	114	69	35	19	43
Kentucky	7	23	12	4	24	3	3	1	0	1
Louisiana	665	654	501	563	423	436	280	157	91	79
Maryland	1	4	6	2	2	1	0	1	0	5
Michigan	111	145	239	159	160	144	241	259	296	237
Mississippi	154	168	175	180	124	85	78	38	14	41
Montana	135	202	388	224	156	125	43	47	28	19
Nebraska	24	13	17	20	14	16	8	7	10	5
Nevada	51	47	41	61	39	54	60	16	6	22
New Mexico	85	120	136	156	116	114	63	71	46	68
New York	2	11	7	7	7	12	9	7	0	0
North Dakota	269	242	268	252	114	74	79	42	37	35
Ohio	1	3	8	3	15	12	9	2	12	0
Oklahoma	240	169	301	256	316	231	202	130	80	152
Oregon	0	9	27	27	13	33	19	8	10	8
Pennsylvania	33	39	49	37	27	3	17	13	0	3
South Dakota	3	2	3	9	14	4	0	7	†	0
Tennessee	26	30	34	24	17	19	4	0	2	1
Texas	1,213	1,438	1,745	1,583	1,353	1,199	932	481	316	388
Utah	106	158	122	127	111	121	29	10	21	12
Virginia	17	24	31	18	9	3	6	7	0	3
West Virginia	15	24	23	9	17	17	4	2	0	2
Wyoming	366	274	317	253	323	306	163	114	64	98
Other	134	227	269	258	208	297	80	46	32	11
Total Land	4,122	4,613	5,421	5,100	4,374	4,102	2,897	1,766	1,337	1,462
Total Marine	278	348	456	578	569	577	597	258	224	230
TOTAL U.S.	4,400	4,962	5,877	5,676	4,943	4,679	3,494	2,024	1,561	1,692

Source: Society of Exploration Geophysicists
† Averages less than one

Notes: Data include government and university activity, but exclude gravity and magnetic methods.
Totals may not add due to rounding.

Rotary Rigs Operating

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	13	11	17	15	16	15	22	10	11	12
Alaska	14	14	23	22	14	14	20	13	8	12
Arizona	0	1	1	1	†	0	†	0	0	0
Arkansas	10	27	34	27	26	26	24	9	9	9
California	96	120	155	129	106	107	81	49	61	60
Colorado	40	61	82	60	52	54	50	24	25	29
Florida	5	4	8	5	4	4	7	2	3	2
Illinois	13	25	45	76	61	41	29	6	3	4
Indiana	†	†	1	7	6	7	4	1	1	0
Kansas	66	120	196	157	125	128	92	47	49	40
Kentucky	†	2	5	10	8	8	6	2	2	5
Louisiana	347	427	456	343	282	310	283	142	135	164
Michigan	25	31	37	31	29	34	34	24	22	20
Mississippi	40	58	72	42	33	32	31	15	13	18
Montana	33	49	81	36	24	36	23	10	9	8
Nebraska	9	14	15	9	9	9	7	3	5	3
Nevada	4	5	5	3	1	5	5	3	1	2
New Mexico	88	118	135	103	65	78	71	29	35	37
New York	9	7	12	15	10	9	5	2	2	1
North Dakota	56	83	119	69	42	51	39	13	14	15
Ohio	46	74	98	57	40	51	29	18	20	14
Oklahoma	247	397	698	622	285	319	252	142	136	126
Oregon	1	†	2	†	†	1	1	0	0	1
Pennsylvania	29	29	39	33	22	36	30	17	17	19
South Dakota	1	2	2	2	1	2	2	1	0	1
Texas	770	987	1,317	990	797	850	680	312	293	281
Utah	29	42	69	40	37	45	29	11	7	6
Virginia	1	1	3	3	2	3	4	5	2	2
West Virginia	30	38	45	49	34	38	26	15	13	13
Wyoming	147	155	191	143	96	115	93	36	39	37
Other	8	7	7	6	5	0	1	3	1	3
TOTAL U.S.	2,177	2,909	3,970	3,105	2,232	2,428	1,980	964	935	936

Source: Baker Hughes, Inc.
† Averages less than one

Note: Data represent annual averages,
and include offshore rigs.

Drilling

New-Field Wildcat Wells Drilled

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	92	73	71	79	84	121	143	76	56	85
Alaska	12	16	14	7	0	10	3	0	3	3
Arizona	2	6	8	6	11	2	1	6	4	1
Arkansas	99	109	146	120	148	124	109	68	69	45
California	113	140	132	94	93	112	96	57	74	58
Colorado	294	353	509	366	299	369	355	177	164	175
Florida	10	8	10	12	13	12	10	6	4	6
Illinois	56	107	167	251	428	324	180	129	104	90
Indiana	63	104	95	113	124	97	102	42	44	19
Kansas	368	386	480	362	345	229	254	367	672	407
Kentucky	86	89	99	177	155	136	63	143	71	56
Louisiana	531	673	800	659	553	673	556	324	293	297
Michigan	247	313	402	449	304	537	445	236	241	226
Mississippi	232	280	355	268	252	281	259	104	103	124
Missouri	9	8	28	11	17	13	9	5	5	10
Montana	255	277	400	204	142	202	193	116	75	109
Nebraska	243	237	269	191	187	176	149	58	99	66
Nevada	11	20	25	10	6	31	24	19	11	11
New Mexico	157	214	248	205	118	112	130	47	55	32
New York	25	30	25	5	10	10	6	6	5	1
North Dakota	113	192	332	246	127	180	133	71	61	75
Ohio	21	4	20	35	27	30	22	21	9	8
Oklahoma	176	196	267	263	168	164	144	130	109	102
Oregon	10	24	11	2	0	2	1	1	1	5
Pennsylvania	19	22	16	21	3	18	24	6	11	17
South Dakota	25	29	46	30	33	14	15	16	6	7
Tennessee	116	222	256	328	311	163	100	37	25	64
Texas	2,588	2,698	3,154	2,293	1,721	1,768	1,488	851	728	716
Utah	65	76	136	108	101	101	42	30	33	33
Virginia	4	2	6	13	13	3	2	6	2	4
West Virginia	16	22	39	26	10	8	6	4	9	3
Wyoming	323	369	551	386	394	507	451	293	269	266
Other	42	33	34	46	44	90	115	75	49	32
TOTAL U.S.	6,423	7,332	9,151	7,386	6,241	6,619	5,630	3,527	3,464	3,153

Source: American Petroleum Institute

Notes: Data include oil wells, gas wells, and dry holes.
Federal offshore wells are included in "Other."

Exploratory Wells Drilled

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	101	77	75	79	84	121	143	80	69	99
Alaska	14	16	20	10	3	13	5	2	3	3
Arizona	2	6	8	7	11	2	2	6	4	1
Arkansas	105	111	154	128	155	133	122	85	90	57
California	395	443	538	468	205	210	201	147	163	109
Colorado	456	553	849	653	510	580	563	285	257	291
Florida	11	8	10	12	13	12	10	6	4	7
Illinois	284	487	736	695	878	777	537	312	231	248
Indiana	183	327	347	451	459	409	403	153	148	99
Kansas	1,022	1,237	1,848	1,838	1,724	2,282	1,503	1,112	1,244	984
Kentucky	423	619	870	1,119	1,421	990	635	237	149	117
Louisiana	665	808	971	801	597	767	621	429	348	340
Michigan	255	316	402	449	306	537	454	260	274	250
Mississippi	242	310	357	268	252	281	260	107	115	137
Missouri	15	22	78	79	45	28	15	5	6	10
Montana	349	382	521	275	185	252	222	143	99	139
Nebraska	265	252	279	197	189	180	160	85	128	89
Nevada	11	20	28	11	8	32	25	20	13	14
New Mexico	212	273	358	314	195	225	288	157	155	110
New York	60	59	79	44	44	30	18	12	8	4
North Dakota	175	256	461	371	211	279	219	126	98	136
Ohio	114	66	151	180	114	110	84	31	41	38
Oklahoma	479	554	733	707	570	518	406	220	242	230
Oregon	17	32	20	8	0	2	3	9	6	11
Pennsylvania	105	255	342	165	92	106	60	25	28	37
South Dakota	32	33	47	33	34	16	16	17	9	9
Tennessee	163	293	333	413	335	164	117	58	31	8
Texas	3,910	4,354	5,688	5,077	4,566	5,136	4,174	2,523	2,219	1,960
Utah	89	112	208	149	133	113	54	38	48	41
Virginia	4	2	6	26	15	3	3	7	2	4
West Virginia	124	119	170	156	66	39	35	14	20	10
Wyoming	411	435	708	537	477	607	552	363	327	318
Other	42	33	35	46	46	94	116	79	50	99
TOTAL U.S.	10,735	12,870	17,430	15,766	13,943	15,048	12,026	7,153	6,629	6,009

Source: American Petroleum Institute

Notes: Data include oil wells, gas wells, and dry holes.
Federal offshore wells are included in "Other."

Development Wells Drilled

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	118	119	142	133	150	266	217	201	203	219
Alaska	71	108	146	200	157	191	98	187	88	124
Arizona	1	0	5	1	1	0	1	0	0	0
Arkansas	393	496	723	680	729	740	875	400	322	369
California	1,592	2,072	2,593	2,107	2,222	3,299	3,122	1,998	2,170	1,595
Colorado	607	857	1,122	1,173	993	1,224	966	472	627	690
Florida	20	11	15	9	7	12	11	8	5	2
Illinois	967	1,828	2,550	2,433	2,318	2,314	1,840	1,040	978	733
Indiana	302	406	460	571	542	529	540	274	180	119
Kansas	3,338	4,923	6,542	6,491	5,407	4,208	3,986	2,038	1,968	1,845
Kentucky	709	1,463	2,030	2,583	2,861	2,854	1,976	918	749	725
Louisiana	3,358	4,223	4,362	4,244	4,379	6,029	4,754	2,257	2,016	1,679
Michigan	264	345	362	435	471	574	394	265	252	375
Mississippi	281	360	431	316	298	331	312	187	201	205
Missouri	56	143	189	104	133	85	62	5	12	2
Montana	471	507	744	536	330	563	385	205	188	205
Nebraska	184	260	327	212	182	187	114	55	65	43
Nevada	0	1	2	0	1	5	9	0	2	3
New Mexico	1,396	1,793	2,099	1,733	1,306	1,404	1,434	761	626	766
New York	437	436	492	623	401	591	418	273	245	149
North Dakota	265	360	417	325	278	421	278	93	88	116
Ohio	3,532	5,023	5,926	4,618	4,402	4,893	3,652	1,906	1,678	1,084
Oklahoma	6,477	9,568	12,357	10,660	8,489	9,086	7,133	4,348	3,530	2,824
Oregon	4	9	0	0	0	0	2	2	4	4
Pennsylvania	2,068	2,833	3,517	3,168	2,547	3,548	2,718	1,246	1,081	738
South Dakota	17	41	43	20	18	28	31	0	6	5
Tennessee	185	257	295	214	211	237	120	125	127	69
Texas	11,414	15,172	20,291	19,707	19,262	21,982	19,225	10,265	8,620	7,343
Utah	187	177	347	313	285	381	302	159	71	83
Virginia	21	25	26	71	24	65	85	132	19	21
West Virginia	1,445	1,752	1,948	1,921	1,600	1,884	1,393	886	836	627
Wyoming	963	1,037	1,289	1,124	1,010	1,156	918	453	446	377
Other	12	11	12	26	46	26	31	334	34	33
TOTAL U.S.	41,155	56,616	71,804	66,751	61,060	69,113	57,402	31,493	27,437	23,172

Source: American Petroleum Institute

Notes: Data include oil wells, gas wells, and dry holes.
Federal offshore wells are included in "Other"

Total Wells Drilled

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	219	196	222	214	234	387	360	281	272	318
Alaska	96	125	172	227	164	215	104	199	94	133
Arizona	4	6	14	14	12	2	3	6	4	1
Arkansas	504	612	889	825	907	898	1,018	485	412	426
California	2,340	3,039	3,838	3,097	2,831	3,947	3,599	2,319	2,531	1,914
Colorado	1,069	1,414	1,977	1,832	1,505	1,810	1,551	1,029	888	981
Florida	32	21	25	21	20	24	21	14	9	9
Illinois	1,327	2,482	3,436	3,253	3,322	3,140	2,381	1,368	1,316	1,125
Indiana	494	751	828	1,051	1,035	1,003	972	446	343	230
Kansas	4,436	6,266	8,551	8,561	7,337	6,606	5,584	3,157	3,218	2,833
Kentucky	1,195	2,171	3,062	3,804	4,424	3,936	2,643	1,161	914	851
Louisiana	4,063	5,147	5,503	5,117	5,037	6,923	5,450	2,690	2,364	2,020
Michigan	538	676	787	900	791	1,131	863	542	536	628
Mississippi	534	680	788	584	550	613	572	295	317	342
Missouri	85	266	397	305	245	260	84	10	18	12
Montana	822	902	1,289	816	519	829	609	348	298	352
Nebraska	450	514	608	414	372	378	277	156	204	133
Nevada	12	21	34	13	9	37	34	20	15	19
New Mexico	1,656	2,126	2,527	2,100	1,539	1,674	1,743	936	799	885
New York	513	507	578	668	447	621	436	285	253	153
North Dakota	440	619	879	696	489	700	497	219	186	253
Ohio	3,657	5,093	6,082	4,814	4,542	5,036	3,743	1,946	1,719	1,124
Oklahoma	6,980	10,158	13,125	11,390	9,097	9,682	7,617	4,605	3,832	3,096
Oregon	21	41	20	8	0	2	5	11	10	18
Pennsylvania	2,295	3,261	3,962	3,399	2,688	3,727	2,806	1,271	1,110	775
South Dakota	49	75	90	53	52	44	49	17	15	14
Tennessee	348	550	628	627	546	401	237	183	158	77
Texas	15,810	20,038	26,442	25,439	24,526	27,917	24,291	13,269	11,207	9,718
Utah	284	291	555	482	418	495	359	199	122	126
Virginia	25	27	32	97	39	68	88	139	21	25
West Virginia	1,612	1,924	2,170	2,114	1,689	1,959	1,432	900	856	637
Wyoming	1,392	1,518	2,043	1,719	1,532	1,821	1,533	831	806	711
Other	60	45	47	75	132	126	147	143	85	132
TOTAL U.S.	53,362	71,562	91,600	84,729	77,050	86,412	71,108	39,480	34,932	30,071

Source: American Petroleum Institute

Notes: Data include oil, gas and service wells, dry holes, stratigraphic and core tests. Federal offshore wells are included in "Other."

Financial

Cost of Drilling & Equipping Wells—1987

	No. of Wells Drilled	Footage Drilled	Depth per Well	Total Cost	Cost per Well	Cost per Foot
		(ft.)			(\$)	
Alabama	187	1,156,077	6,182	74,987,181	401,001	64.86
Alaska	139	1,387,678	9,983	297,346,095	2,139,181	214.28
Arkansas	409	1,773,122	4,335	73,284,218	179,179	41.33
California	2,438	5,901,875	2,421	588,469,550	241,374	99.71
Colorado	885	5,432,817	6,139	182,703,703	206,445	33.63
Florida	10	132,757	13,276	14,050,527	1,405,053	105.84
Illinois	1,168	2,616,378	2,240	67,026,775	57,386	25.62
Indiana	288	446,238	1,549	8,596,202	29,848	19.26
Kansas	3,148	9,900,143	3,145	213,569,899	67,843	21.57
Kentucky	677	1,269,683	1,875	39,686,078	58,620	31.26
Louisiana	2,393	16,893,771	7,060	1,961,364,564	819,626	116.10
Michigan	521	2,506,134	4,810	168,573,009	323,557	67.26
Mississippi	313	2,584,489	8,257	131,905,972	421,425	51.04
Montana	282	1,227,623	4,353	53,568,221	189,958	43.64
Nebraska	189	1,050,448	5,558	25,744,190	136,213	24.51
New Mexico	750	4,651,325	6,202	260,531,174	347,375	56.01
North Dakota	183	1,676,222	9,160	89,684,686	490,080	53.50
Oklahoma	3,597	19,473,997	5,414	999,642,095	277,910	51.33
Texas	10,619	55,697,709	5,245	2,862,981,733	269,609	51.40
Utah	115	690,759	6,007	57,818,067	502,766	83.70
Wyoming	755	5,029,127	6,661	232,201,403	307,552	46.17
Appalachia	3,659	14,459,691	3,952	426,869,146	116,663	29.52
Federal Waters	78	821,849	10,537	376,171,514	4,822,712	457.71
Other	238	576,696	2,423	31,973,467	134,342	55.44
Total Offshore	709	7,345,260	10,360	2,053,285,339	2,896,030	279.54
Total Onshore	32,332	150,011,348	4,640	7,185,464,130	222,240	47.90
TOTAL U.S.	33,041	157,356,608	4,762	9,238,749,469	279,615	58.71
Exploratory Wells	6,536	37,366,534	5,717	2,242,548,891	343,107	60.01
Development Wells	26,505	119,990,074	4,527	6,996,200,578	263,958	58.31

Source: Joint Association Survey on Drilling Costs

Notes: Appalachia includes New York, Ohio, Pennsylvania and West Virginia.
1988 data are unavailable.

Cost Indices

	Oil Field Machinery	Oil Well Casing	Line Pipe (carbon)	Oil Field Wages
1973	30.3	29.4	33.4	40.6
1974	35.9	37.6	45.5	44.9
1975	44.6	46.6	54.7	50.9
1976	49.5	49.2	56.3	56.0
1977	53.8	53.9	62.5	60.6
1978	59.5	59.9	71.2	68.2
1979	65.8	63.0	72.8	74.3
1980	76.3	72.0	80.7	82.1
1981	91.1	89.8	94.6	91.3
1982	100.0	100.0	100.0	100.0
1983	97.4	90.2	97.5	104.8
1984	96.6	86.2	97.3	108.1
1985	96.8	86.0	97.2	112.7
1986	94.3	80.3	96.7	116.4
1987	93.3	81.6	97.3	118.9
1988	97.1	87.4	99.6	122.3

Sources: Bureau of Labor Statistics
Wage index computed by IPAA

Drilling Costs

	Total Costs	Per Well	Per Foot
	(thous. \$)		(\$)
1965	2,407,437	60,648	13.44
1966	2,360,740	68,386	14.95
1967	2,299,178	72,902	15.97
1968	2,409,360	81,403	16.83
1969	2,610,671	88,554	17.56
1970	2,578,682	94,885	18.84
1971	2,371,492	94,703	19.03
1972	2,814,166	106,424	20.76
1973	3,074,532	117,152	22.50
1974	4,366,989	138,718	28.93
1975	6,571,214	177,793	36.99
1976	7,461,680	191,615	40.46
1977	9,956,453	229,181	46.82
1978	13,061,000	279,950	56.64
1979	16,078,930	331,367	67.71
1980	22,800,356	367,682	77.03
1981	36,665,457	453,691	94.30
1982	39,428,119	514,378	108.73
1983	25,104,543	371,721	83.34
1984	25,206,219	326,463	71.90
1985	23,696,603	349,399	75.35
1986	13,552,403	364,577	76.88
1987	9,238,749	279,615	58.71

Source: Joint Association Survey
1988 data unavailable

Drilling Summary—1987

	Oil Wells	Gas Well	Dry Holes	Total Wells
Number of Wells Drilled	15,326	7,255	10,460	33,041
Footage Drilled (thous. ft.)	64,602	39,674	53,081	157,357
Total Cost (mill. \$)	3,769	2,759	2,710	9,239
Average Depth (ft.)	4,215	5,469	5,075	4,762
Average Cost per Well (\$)	245,950	380,354	259,068	279,615
Average Cost per Foot (\$)	58.35	69.55	51.05	58.71

Source: Joint Association Survey
1988 data unavailable

Notes: Data includes all costs incurred through Christmas.
Totals may not add due to rounding.

Financial Statistics

Rates of Return

Oil & Gas Companies	All Mfg. Companies
(%)	

Exploration and Development Outlays

Larger Companies	Inde- pendents	Total Industry
(mill. \$)		

1961	8.7	8.9	2,417	1,583	4,000
1962	8.8	9.8	2,848	1,577	4,425
1963	9.8	10.3	2,452	1,673	4,125
1964	10.1	11.6	2,817	1,633	4,450
1965	11.3	13.0	2,847	1,363	4,210
1966	12.3	13.4	2,990	1,260	4,250
1967	12.6	11.7	3,212	1,153	4,365
1968	12.2	12.1	4,087	1,303	5,390
1969	10.9	11.5	3,768	1,482	5,250
1970	9.9	9.3	3,119	1,656	4,775
1971	9.3	9.7	2,740	1,160	3,900
1972	9.6	10.6	4,225	2,255	6,480
1973	10.5	13.0	5,275	2,865	8,140
1974	14.6	14.9	8,550	3,805	12,355
1975	12.9	11.6	6,830	3,420	10,250
1976	15.2	13.9	8,646	5,864	14,510
1977	14.2	14.2	10,305	6,195	16,500
1978	13.8	15.0	11,275	8,025	19,300
1979	18.2	16.5	15,000	11,750	26,750
1980	18.1	14.1	20,553	15,647	36,200
1981	16.4	14.0	29,765	26,710	56,475
1982	12.8	9.2	30,000	25,400	55,400
1983	10.9	10.5	22,650	18,225	40,875
1984	8.7	12.5	22,050	19,400	41,450
1985	6.5	10.0	17,000*	16,000*	30,000*
1986	5.4	9.6	9,000*	8,000*	17,000*
1987	7.7	12.8	10,000*	7,000*	17,000*
1988	15.0	16.1	10,000*	6,000*	16,000*

Sources: Chase Manhattan Bank, Federal Trade Commission, and
Department of Commerce

*Estimated by IPAA

Producing Wells

Producing Crude Oil Wells

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	514	669	692	719	741	759	810	844	875	892
Alaska	400	642	700	760	672	640	977	1,109	1,216	1,305
Arizona	35	32	35	36	34	31	28	24	23	20
Arkansas	7,698	8,104	8,249	8,629	8,370	9,490	9,700	10,047	8,398	7,865
California	44,674	45,591	47,362	47,231	47,197	48,541	49,874	43,717	45,694	45,819
Colorado	3,402	3,490	2,898	3,113	3,591	5,360	5,457	5,502	5,642	6,286
Florida	115	120	117	123	137	138	149	114	122	109
Illinois	24,067	24,745	26,100	600	28,967	30,045	31,100	32,025	32,307	32,262
Indiana	5,296	5,452	5,715	6,047	6,465	6,792	7,164	7,610	7,449	7,449
Kansas	47,379	47,457	42,402	46,189	49,348	49,198	51,888	48,816	48,051	47,484
Kentucky	14,097	14,517	14,585	15,109	15,562	19,980	21,844	22,639	22,974	22,883
Louisiana	24,767	26,014	25,320	22,380	23,376	24,508	26,354	29,921	29,758	27,079
Michigan	3,890	4,109	4,417	4,536	4,913	4,881	5,143	4,885	4,996	4,866
Mississippi	2,556	2,631	3,154	2,640	2,727	2,562	3,468	2,235	2,143	2,050
Missouri	188	258	421	499	552	557	581	450	200	286
Montana	3,573	3,628	3,968	4,311	4,675	4,201	4,196	3,933	4,050	4,128
Nebraska	1,535	1,679	1,870	2,006	2,100	2,095	2,091	1,838	1,852	1,824
Nevada	26	25	28	31	34	37	45	29	35	38
New Mexico	15,045	15,746	16,289	16,526	17,409	18,146	18,697	18,409	18,401	17,890
New York	4,800	5,000	5,300	5,320	5,432	4,678	4,811	4,632	4,428	4,245
North Dakota	1,908	2,290	2,570	2,870	3,734	3,404	3,697	3,543	3,474	3,511
Ohio	19,177	20,451	22,441	24,752	26,287	26,878	27,975	29,937	30,013	30,134
Oklahoma	76,505	78,463	82,639	91,745	95,868	99,600	102,342	100,261	101,745	97,685
Pennsylvania	27,768	27,925	26,138	25,285	24,657	20,739	24,000	20,000	14,271	13,255
South Dakota	88	118	120	130	140	138	165	148	149	151
Tennessee	338	441	489	650	693	775	798	806	648	720
Texas	168,123	174,511	180,627	187,626	195,595	203,664	209,040	201,272	198,163	198,008
Utah	1,346	1,478	1,543	1,583	1,634	1,799	1,944	1,858	1,785	1,849
West Virginia	14,225	14,425	14,700	14,900	15,300	15,475	15,895	15,750	15,850	15,950
Wyoming	10,059	10,227	11,574	11,792	11,349	11,561	12,038	11,879	10,953	11,850
Federal Waters	3,259	3,266	4,535	4,985	4,710	4,104	4,327	4,425	4,487	4,526
Other	2	6	11	19	21	31	28	32	29	29
TOTAL U.S.	526,855	543,510	557,009	580,142	603,290	620,807	646,626	628,690	620,181	612,448

Source: World Oil

Notes: Data include wells on artificial lift and flowing.
Figures quoted as of December 31st each year.

Producing Natural Gas Wells

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	264	262	309	461	540	664	822	976	1,100	1,190
Alaska	56	54	120	123	103	78	81	103	87	108
Arkansas	1,200	1,188	1,337	1,679	1,850	2,371	2,550	2,719	2,847	2,996
California	838	905	1,154	1,050	1,082	1,168	1,319	1,285	1,293	1,269
Colorado	2,444	2,650	3,988	3,667	4,072	3,663	4,529	3,573	3,948	4,326
Illinois	51	58	70	60	67	157	190	217	238	277
Indiana	631	655	698	720	736	1,194	1,220	1,289	808	1,298
Kansas	10,351	10,544	11,014	11,254	11,494	11,503	11,776	11,485	11,280	12,538
Kentucky	7,765	7,992	8,033	8,084	8,234	9,013	9,515	9,926	10,493	10,797
Louisiana	10,848	11,486	12,763	13,503	13,894	14,238	14,423	16,479	16,647	16,154
Michigan	376	423	667	667	539	749	755	740	670	687
Mississippi	431	458	570	520	525	671	690	555	749	535
Montana	1,881	2,150	2,142	2,069	2,043	2,088	2,033	1,818	2,100	2,023
Nebraska	23	22	26	22	24	21	N/A	N/A	N/A	N/A
New Mexico	12,922	13,843	14,968	16,025	16,214	16,401	23,627	22,362	23,413	18,964
New York	2,200	2,200	2,500	2,650	2,969	3,800	4,324	4,927	5,180	5,340
North Dakota	22	52	51	66	123	90	98	103	103	101
Ohio	15,271	16,845	18,619	21,070	24,621	27,846	32,148	32,745	33,369	33,931
Oklahoma	14,062	15,245	16,994	20,742	22,135	23,647	24,756	25,734	26,595	27,307
Pennsylvania	18,900	19,700	20,526	21,500	23,000	24,000	24,000	26,500	26,000	28,000
South Dakota	0	10	39	37	40	40	42	44	52	52
Tennessee	143	200	210	360	415	726	820	788	790	764
Texas	36,240	37,819	39,575	42,295	43,395	44,834	46,615	46,442	45,552	45,984
Utah	182	200	226	282	322	659	655	411	497	460
Virginia	268	274	274	290	292	499	581	562	685	710
West Virginia	24,425	25,600	26,925	28,350	29,675	30,700	32,500	33,150	33,950	34,650
Wyoming	1,007	1,504	1,888	1,889	1,919	1,933	2,161	2,084	2,104	2,147
Federal Waters	2,863	2,853	3,907	4,200	4,000	3,552	3,483	3,404	3,213	3,298
Other	19	21	16	28	31	228	52	89	93	98
TOTAL U.S.	165,683	175,213	189,609	203,663	214,354	226,077	245,765	250,510	253,856	256,004

Source: World Oil

Notes: Data include natural gas distillate wells.
Figures quoted as of December 31st each year.

Production

Crude Oil Production

(thous. bbls.)	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	19,161	22,153	20,680	20,014	18,746	19,804	21,581	21,122	20,607	20,797
Alaska	511,335	591,646	587,337	618,910	625,527	630,401	666,233	681,310	715,955	738,143
Arizona	472	406	357	335	237	215	175	161	131	113
Arkansas	18,869	18,210	18,352	18,849	18,849	18,730	19,044	15,778	14,230	13,606
California	352,268	356,923	384,958	401,572	404,688	412,020	423,877	406,665	395,698	386,014
Colorado	32,324	29,802	30,303	30,545	29,050	28,845	30,246	29,309	28,802	32,352
Florida	47,168	42,886	34,773	25,626	19,476	14,462	11,458	9,383	8,270	7,746
Illinois	21,793	22,702	24,090	27,710	29,200	28,868	30,265	27,245	23,980	22,476
Indiana	4,715	4,978	4,721	5,563	5,321	5,526	5,168	4,759	3,738	3,665
Kansas	56,995	60,151	65,810	70,525	71,594	75,729	75,407	67,034	59,884	58,824
Kentucky	5,514	5,946	6,548	7,349	7,886	7,777	7,790	6,475	5,743	5,458
Louisiana	489,687	469,141	449,315	458,395	479,569	515,268	508,239	512,108	476,030	437,139
Michigan	34,862	33,808	32,665	31,462	31,736	30,554	27,300	25,688	25,972	23,250
Mississippi	37,327	35,945	34,204	33,047	31,455	32,776	30,641	29,997	28,103	27,553
Missouri	91	130	226	202	269	285	243	110	110	156
Montana	29,957	29,584	30,813	30,921	29,225	29,761	29,768	27,072	25,059	23,338
Nebraska	6,068	6,240	6,671	6,872	6,380	6,452	6,943	7,098	6,091	5,978
Nevada	1,235	880	700	613	810	1,907	3,039	2,907	3,112	3,230
New Mexico	79,649	75,324	71,568	71,024	75,169	79,336	78,530	75,712	72,328	71,235
New York	855	824	841	834	831	840	1,071	853	710	566
North Dakota	30,914	40,337	45,424	47,271	50,690	52,652	50,857	45,628	41,351	39,343
Ohio	11,953	12,928	13,551	14,571	14,971	15,271	14,988	13,442	12,153	11,711
Oklahoma	143,642	150,140	154,056	158,621	158,604	168,385	162,739	149,105	134,378	128,874
Pennsylvania	2,874	2,651	3,729	4,282	4,282	4,284	4,851	3,783	3,302	2,830
South Dakota	846	765	973	1,158	1,172	1,340	1,596	1,586	1,644	1,657
Tennessee	614	743	918	1,132	1,056	920	786	644	614	601
Texas	1,018,094	977,436	945,132	925,296	902,676	904,774	888,831	839,606	785,475	762,820
Utah	27,728	24,978	25,860	22,440	29,534	34,689	40,792	39,172	35,788	33,018
Virginia	4	10	13	49	65	32	26	18	17	25
West Virginia	2,406	2,336	3,473	3,227	3,628	3,524	3,555	3,145	2,835	2,621
Wyoming	131,890	126,362	130,563	118,300	118,303	124,269	128,514	121,337	115,267	113,985
TOTAL U.S.	3,121,310	3,146,365	3,128,624	3,156,715	3,170,999	3,249,696	3,274,553	3,168,252	3,047,378	2,979,123
DAILY AVG.	8,552	8,597	8,572	8,649	8,688	8,879	8,971	8,680	8,349	8,140

Source: Energy Information Administration

Note: Data include lease condensate.

Crude Oil Production By Chase Group

(thous. b/d)	Chase Group	All Other	Total Industry
1955	4,173	2,634	6,807
1956	4,406	2,745	7,151
1957	4,487	2,683	7,170
1958	4,141	2,569	6,710
1959	4,379	2,675	7,054
1960	4,423	2,612	7,035
1961	4,510	2,673	7,183
1962	4,706	2,626	7,332
1963	4,905	2,637	7,542
1964	5,017	2,597	7,614
1965	5,269	2,535	7,804
1966	5,628	2,667	8,295
1967	6,070	2,740	8,810
1968	6,312	2,784	9,096
1969	6,418	2,820	9,238
1970	6,814	2,823	9,637
1971	6,747	2,716	9,463
1972	6,730	2,711	9,441
1973	6,570	2,638	9,208
1974	6,173	2,601	8,774
1975	5,891	2,484	8,375
1976	5,587	2,545	8,132
1977	5,668	2,577	8,245
1978	6,193	2,514	8,707
1979	5,944	2,608	8,552
1980	6,071	2,526	8,597
1981	5,932	2,640	8,572
1982	5,964	2,685	8,649
1983	5,890*	2,798*	8,688
1984	5,870*	3,009*	8,879
1985	5,850*	3,121*	8,971
1986	5,750*	2,930*	8,680
1987	5,650*	2,699*	8,349
1988	5,633*	2,507*	8,140

Excluding Alaska North Slope

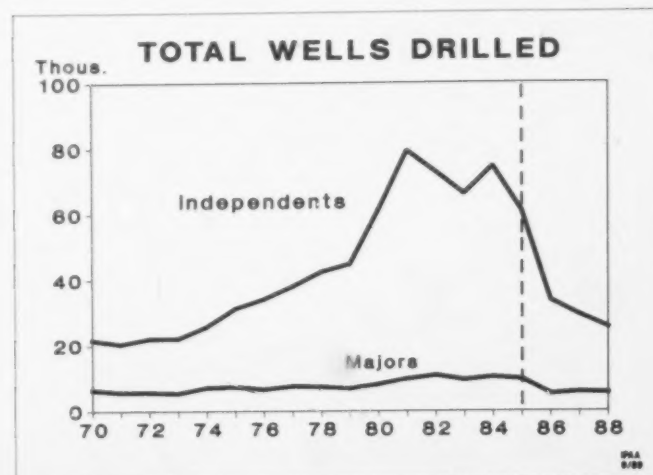
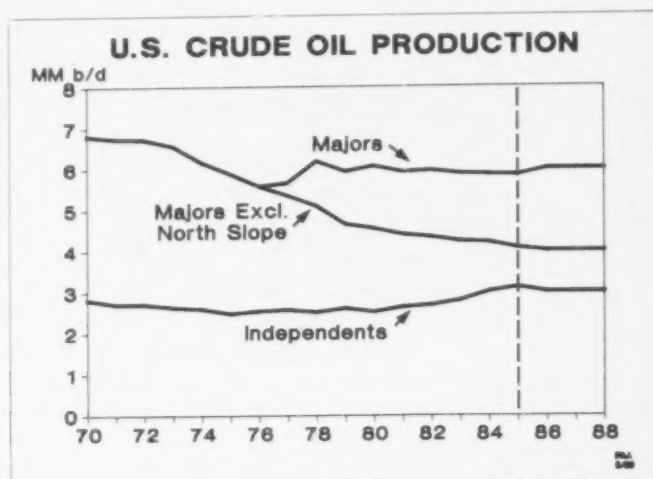
1977	5,358	2,576	7,934
1978	5,103	2,514	7,617
1979	4,661	2,608	7,269
1980	4,554	2,526	7,080
1981	4,408	2,640	7,048
1982	4,343	2,685	7,028
1983	4,244*	2,798*	7,042
1984	4,208*	3,009*	7,217
1985	4,071*	3,121*	7,192
1986	3,932*	2,930*	6,862
1987	3,733*	2,699*	6,387
1988	3,658*	2,494*	6,123

Source: Chase Manhattan Bank
* Estimated by IPAA

Value of U.S. Fossil Fuels

(bill. \$)	Crude Oil	Natural Gas	Coal and Lignite	Anthracite	Total
1977	25.79	15.82	13.70	0.20	55.51
1978	28.60	18.18	14.49	0.18	61.45
1979	39.45	24.16	18.36	0.20	82.17
1980	67.93	32.09	20.20	0.26	120.48
1981	99.40	39.51	21.51	0.24	160.66
1982	90.03	45.56	22.62	0.23	158.44
1983	83.05	43.57	20.11	0.21	146.94
1984	84.10	48.49	22.75	0.20	155.54
1985	78.88	43.17	22.06	0.22	144.33
1986	39.63	32.57	21.00	0.19	93.39
1987	46.93	28.97	21.05	0.16	97.11
1988	37.40	29.91	21.02	0.15	88.48

Source: Energy Information Administration



Natural Gas Production

(MMcf)	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	85,815	65,294	79,244	75,003	90,801	101,821	107,342	107,184	117,241	129,523
Alaska	220,754	230,588	242,564	264,364	276,691	289,129	321,346	304,841	359,837	392,204
Arizona	247	214	187	99	132	45	85	63	60	55*
Arkansas	109,452	111,808	92,986	124,611	127,561	135,161	155,099	131,075	141,151	146,900
California	248,206	309,783	380,730	383,977	415,324	476,333	491,283	462,218	424,621	398,939
Colorado	191,239	188,001	195,706	209,892	163,545	173,257	178,233	163,684	164,557	193,080
Florida	50,190	40,638	32,470	22,515	21,056	12,585	10,545	8,833	8,281	7,811
Illinois	1,585	1,574	1,295	1,162	1,030	1,530	1,324	1,887	1,371	1,300*
Indiana	350	463	330	233	135	394	367	365	217	200*
Kansas	797,762	735,035	640,114	429,597	434,736	465,979	512,872	465,695	457,050	470,557
Kentucky	59,520	57,180	61,312	51,924	46,720	61,518	73,126	80,195	70,125	70,000*
Louisiana	7,266,217	6,639,416	6,780,184	6,171,627	5,332,113	5,825,055	5,013,702	4,895,394	5,122,509	5,095,926
Maryland	28	68	56	36	31	60	39	20	44	50*
Michigan	159,731	158,302	152,593	153,051	138,910	144,537	131,855	127,287	146,996	148,900
Mississippi	144,077	175,061	181,238	167,231	151,204	157,911	144,172	140,833	139,727	130,290
Missouri	0	0	0	0	0	4	4	4	4	4*
Montana	53,888	51,867	56,565	56,517	51,967	51,474	52,494	46,592	46,456	47,472
Nebraska	3,208	2,550	2,519	2,280	2,091	2,300	1,944	1,403	1,261	1,200*
New Mexico	1,181,363	1,149,781	1,134,078	991,178	895,279	957,366	905,272	702,614	823,773	781,832
New York	15,500	15,643	16,074	15,877	17,836	25,200	31,561	29,964	25,676	20,000*
North Dakota	18,468	42,346	42,573	53,818	69,319	70,496	72,633	55,098	62,258	57,548
Ohio	123,431	138,856	141,134	138,391	151,300	186,480	182,245	182,072	166,593	165,691*
Oklahoma	1,835,366	1,891,824	2,019,199	1,934,412	1,730,061	1,985,869	1,936,341	1,917,493	2,004,797	2,009,964
Oregon	2,000	5,000	5,000	3,399	3,159	2,790	4,080	4,600	3,800	3,500*
Pennsylvania	96,313	97,439	122,454	121,111	118,372	166,342	150,234	159,889	163,318	165,000*
South Dakota	914	1,193	1,155	2,331	1,846	1,947	2,556	2,231	3,431	3,500*
Tennessee	941	1,241	1,719	2,976	3,950	5,022	4,686	3,464	2,707	3,000*
Texas	7,174,623	7,115,889	6,910,021	6,468,817	5,938,561	6,185,021	6,052,663	6,151,775	6,126,315	6,211,318
Utah	58,605	87,766	91,191	94,255	63,158	74,698	83,405	90,013	87,158	107,059
Virginia	8,544	7,812	8,903	6,880	4,346	8,901	15,041	15,427	19,223	25,000*
West Virginia	150,505	156,551	161,251	150,050	130,078	143,730	144,883	135,431	160,000	157,400
Wyoming	414,416	409,541	410,499	424,657	443,988	516,683	416,565	403,266	497,980	511,666
TOTAL U.S.	20,473,258	19,888,724	19,965,344	18,523,071	16,825,300	18,229,638	17,197,999	16,790,910	17,348,537	17,456,889

Source: Energy Information Administration
*Estimated by IPAA

Notes: Data represent marketed production.
All 1987 figures are revised.

Stripper Wells

Stripper Well Production

(thous. bbls.)	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Alabama	121	144	125	122	158	173	172	189	191	193
Arizona	5	5	16	23	24	26	29	28	25	30
Arkansas	7,754	7,231	5,690	5,465	5,132	7,118	5,653	5,286	5,114	4,888
California	49,558	45,521	44,110	54,804	55,419	55,993	57,125	41,573	37,182	37,796
Colorado	2,018	1,955	1,989	2,159	2,204	3,630	3,330	2,682	6,216	7,323
Illinois	21,160	20,325	20,167	22,238	23,989	25,889	25,984	27,719	24,157	21,682
Indiana	4,560	4,557	4,019	4,781	4,568	4,336	4,401	4,104	3,827	3,657
Kansas	44,461	43,948	44,545	45,010	47,629	48,267	48,665	50,861	61,435	57,803
Kentucky	4,713	4,549	4,573	4,479	5,144	5,522	6,630	6,696	5,514	4,882
Louisiana	7,916	7,681	7,657	9,012	9,172	9,000	9,844	9,000	10,059	8,810
Michigan	5,602	5,621	4,717	2,449	2,820	3,145	3,228	3,272	2,782	2,674
Mississippi	1,234	1,601	1,890	3,805	2,237	1,286	1,330	1,721	1,121	1,270
Missouri	53	54	127	226	53	271	271	250	182	101
Montana	2,805	2,830	2,710	2,748	2,881	3,104	2,577	2,937	2,709	2,651
Nebraska	2,025	1,866	2,237	2,510	2,879	3,418	2,974	2,947	2,617	2,688
Nevada	0	0	0	0	9	0	0	0	0	0
New Mexico	11,831	12,068	12,924	13,463	14,207	14,722	15,016	15,367	14,747	14,377
New York	852	855	824	849	719	774	680	601	489	511
North Dakota	1,197	1,250	1,225	1,386	1,493	1,537	1,756	1,905	1,693	1,833
Ohio	7,808	8,367	9,050	9,486	10,199	10,480	10,690	10,491	9,767	8,829
Oklahoma	74,175	76,001	79,945	83,249	94,237	94,430	94,046	91,842	95,903	109,082
Pennsylvania	2,565	2,817	2,651	3,606	3,718	3,951	4,242	4,257	3,356	2,870
South Dakota	17	22	25	39	55	44	82	65	34	57
Tennessee	270	388	293	291	N/A	584	510	451	475	445
Texas	131,211	136,590	141,825	145,940	143,929	153,689	152,720	158,738	147,986	141,704
Utah	135	180	220	377	N/A	543	1,089	1,550	878	935
Virginia	2	4	10	13	49	22	27	21	14	16
West Virginia	2,255	2,382	2,313	2,607	2,683	3,116	3,270	3,346	2,988	2,765
Wyoming	5,333	5,597	5,211	5,367	6,355	6,944	7,119	7,983	7,984	6,963
TOTAL U.S.	391,633	394,405	401,095	426,502	441,951	462,013	463,459	455,882	449,446	446,837

Sources: Interstate Oil Compact Commission and
National Stripper Well Association

Notes: 1988 data are unavailable.
Totals may not add due to rounding.

Producing Stripper Wells

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
Alabama	69	78	68	73	92	95	98	100	124	122
Arizona	7	8	10	12	14	17	14	14	16	15
Arkansas	6,822	6,767	6,820	5,847	5,167	7,218	4,738	4,942	4,416	4,438
California	24,198	25,957	25,400	26,566	26,354	26,358	26,650	29,230	29,044	26,988
Colorado	1,016	1,074	1,143	1,255	1,354	1,861	1,690	1,798	4,269	5,097
Illinois	23,622	23,860	24,501	25,472	26,813	28,566	29,942	30,593	31,649	31,883
Indiana	5,038	5,092	5,022	5,874	5,353	5,854	6,134	5,457	5,165	4,985
Kansas	43,154	44,686	41,876	42,924	44,521	47,592	45,749	48,235	50,182	51,953
Kentucky	13,953	14,028	14,075	14,130	14,275	17,000	16,433	17,674	17,992	18,073
Louisiana	13,600	12,131	15,889	15,950	12,010	16,500	16,500	16,000	15,500	15,000
Michigan	3,331	3,405	3,325	3,057	3,361	3,367	3,500	3,475	3,285	3,015
Mississippi	657	813	1,523	2,138	1,923	837	837	811	681	644
Missouri	144	157	301	440	530	548	548	429	388	289
Montana	1,983	1,996	2,082	2,058	2,243	2,673	3,085	3,376	3,493	3,300
Nebraska	987	1,037	1,223	1,414	1,585	1,672	1,707	1,716	1,637	1,589
Nevada	0	0	4	0	0	0	0	0	0	0
New Mexico	11,401	11,829	12,519	13,226	13,882	14,280	14,749	15,199	14,466	14,622
New York	4,700	5,000	5,220	5,345	5,259	4,228	4,532	4,448	4,309	4,221
North Dakota	741	782	878	836	959	922	1,016	1,091	1,106	1,125
Ohio	17,006	18,222	19,650	21,982	22,966	24,263	25,129	26,412	28,652	28,908
Oklahoma	59,971	64,893	66,128	69,781	73,328	77,729	82,431	83,034	84,425	77,154
Pennsylvania	27,768	27,925	25,991	25,285	23,438	21,831	19,540	11,877	14,271	13,255
South Dakota	11	10	12	23	33	33	30	24	17	27
Tennessee	265	318	387	398	N/A	716	689	952	848	853
Texas	96,713	98,487	103,594	107,596	111,671	117,178	126,202	130,311	123,796	123,945
Utah	95	106	125	196	N/A	217	348	519	853	824
Virginia	5	7	8	12	20	26	32	30	49	51
West Virginia	13,925	14,000	14,150	14,300	14,550	14,900	15,200	15,500	15,800	15,925
Wyoming	3,453	3,642	3,252	3,349	4,792	5,020	5,020	5,200	3,996	3,486
TOTAL U.S.	374,635	386,310	395,176	409,539	416,493	441,501	452,543	458,447	460,429	451,787

Sources: Interstate Oil Compact Commission and
National Stripper Well Association

Notes: 1988 data are unavailable.
Figures quoted as of December 31st each year.

Prices

Crude Oil Wellhead Prices

(\$/bbl.)	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	11.97	20.57	35.80	32.32	30.07	29.39	25.77	13.91	16.76	13.85
Alaska	10.74	15.63	23.60	20.08	17.92	18.13	17.12	6.71	10.95	8.52
Arizona	8.29	12.30 *	24.00 *	31.00 *	30.00 *	28.00 *	27.00 *	15.15 *	17.35 *	14.57 *
Arkansas	14.72	24.17	33.69	30.12	28.28	28.15	25.79	14.54	17.23	14.42
California	12.78	23.87	26.80	24.58	22.61	22.09	22.14	11.90	13.91	10.87
Colorado	13.28	22.91	35.69	31.56	28.92	28.09	25.64	13.98	17.71	14.82
Florida	13.07	18.84	25.00 *	32.00 *	31.10 *	31.00 *	29.00 *	23.13 *	16.05 *	16.43 *
Illinois	23.49	35.78	36.03	31.69	29.12	28.76	26.90	14.70	17.53	14.79
Indiana	23.28	35.91	36.07	31.66	29.06	28.72	26.82	14.55	17.49	14.78
Kansas	21.57	34.20	35.80	30.79	28.45	27.99	25.33	14.02	17.37	14.56
Kentucky	22.55	34.98	35.90	31.19	28.60	28.24	26.20	14.20	17.19	14.58
Louisiana	11.42	19.87	35.45	32.44	30.02	29.67	27.22	15.32	17.97	15.21
Michigan	14.47	23.54	35.74	31.80	28.93	28.54	26.16	14.61	17.63	14.92
Mississippi	10.74	20.85	30.47	29.04	26.76	27.26	25.51	13.63	16.78	13.98
Missouri	25.68 *	37.75 *	34.38 *	31.25 *	31.20 *	27.50 *	25.00 *	15.25 *	17.25 *	14.50 *
Montana	12.03	20.53	34.69	31.25	28.80	28.07	25.29	13.58	16.57	13.84
Nebraska	18.13	30.60	35.32	30.98	28.58	27.83	25.42	13.70	17.07	14.12
Nevada	11.54 *	16.65 *	23.96 *	23.95 *	23.80 *	25.80 *	26.00 *	12.00 *	11.50 *	12.50 *
New Mexico	14.33	24.06	35.04	31.82	29.26	28.69	26.84	14.93	17.58	14.78
New York	23.78	37.39	34.15	30.91	28.19	27.70	25.19	16.03	17.40	15.50 *
North Dakota	13.64	26.42	35.63	31.89	29.27	28.39	25.32	13.54	16.74	13.86
Ohio	22.79	36.64	36.11	30.90	28.14	27.71	25.11	15.51	17.42	15.19
Oklahoma	17.53	29.25	35.43	32.04	29.67	29.11	26.28	14.47	17.62	14.86
Pennsylvania	24.13	37.46	36.03	30.77	28.28	27.71	25.05	15.77	17.43	15.26
South Dakota	15.35	28.81	35.55	31.63	29.10	28.36	25.79	13.81	16.96	14.04
Tennessee	20.26	34.29	33.00 *	32.10 *	32.00 *	28.00 *	26.00 *	15.00 *	15.84 *	13.99 *
Texas	12.65	21.84	35.06	31.77	29.35	28.87	26.80	14.73	17.54	14.71
Utah	11.41	19.79	34.14	30.50	28.12	27.21	23.98	13.33	17.25	14.25
Virginia	24.80 *	37.21 *	36.25 *	32.35 *	32.25 *	27.28 *	24.75 *	15.00 *	15.75 *	13.95 *
West Virginia	23.35	36.92	35.63	29.98	27.27	26.90	24.35	14.68	16.56	14.35
Wyoming	11.73	21.34	32.30	29.37	27.19	26.73	24.67	12.94	16.44	13.47
TOTAL U.S.	12.64	21.59	31.77	28.52	26.19	25.88	24.09	12.51	15.41	12.57

Source: Energy Information Administration
 * Estimated by IPAA

Note: Data represent average first purchase prices of crude oil at the lease or wellhead.

Natural Gas Wellhead Prices

(\$/Mcf)	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	2.04	3.19	4.77	3.44	4.28	3.73	3.71	2.89	2.97	2.85
Alaska	0.52	0.73	0.62	0.63	0.73	0.73	0.74	0.50	0.94	1.16
Arizona	0.41	1.15	1.85	2.59	3.08	2.90	2.80*	2.15*	1.75*	1.80
Arkansas	0.96	0.70	1.81	2.13	2.29	2.54	2.55	2.51	2.29	1.40
California	1.71	2.17	2.57	3.09	3.57	3.80	3.36	2.89	2.37	1.85
Colorado	1.41	1.47	1.97	3.17	3.38	3.43	2.90	2.05	1.76	1.60
Florida	1.57	1.73	2.71	2.46	2.33	2.57	2.43	1.20	1.68	1.21
Illinois	1.86	1.90	2.47	2.62	2.84	2.78	2.77	2.57	2.24	2.20
Indiana	1.05	1.35	2.08	1.55	2.09	3.38	2.51	1.23	1.71	1.57
Kansas	0.76	0.77	0.92	1.51	1.57	1.49	1.27	1.21	1.15	1.34
Kentucky	0.95	0.89	1.01	1.52	1.51	1.70	2.39	1.88	1.82	3.12
Louisiana	1.12	1.61	2.07	2.60	2.67	2.73	2.66	2.21	1.78	1.81
Maryland	0.38	0.45	0.48	0.77	0.56	0.55	0.59	0.58	0.54	0.94
Michigan	1.74	2.36	2.86	3.19	3.58	3.76	3.60	3.60	3.24	3.20
Mississippi	1.60	2.32	3.21	3.91	3.78	3.47	3.17	2.13	1.94	1.86
Missouri	1.35*	2.00*	2.50*	3.00*	3.45*	3.75	3.50	3.75	3.75	3.70
Montana	1.21	1.45	1.91	2.15	2.41	2.46	2.39	2.05	1.80	1.70
Nebraska	0.85	0.83	1.45	1.99	2.93	2.24	3.01	2.82	2.42	2.66
New Mexico	1.37	1.76	2.13	2.47	2.68	2.71	2.62	1.87	1.66	1.71
New York	1.27	1.95	2.67	3.75	3.85	4.00	3.37	3.39	2.00	2.30
North Dakota	1.28	1.19	1.94	2.30	2.27	2.26	1.90	1.35	1.30	0.79
Ohio	1.81	1.98	2.17	2.71	3.24	3.19	3.08	2.84	2.58	2.55
Oklahoma	1.12	1.51	1.88	2.74	2.83	2.72	2.47	1.71	1.47	1.54
Oregon	2.13	2.40	2.60	3.33	3.33	2.78	2.40	2.00	1.45	1.55
Pennsylvania	1.33	2.13	2.33	2.80	3.00	3.25	3.16	2.50	2.25	2.30
South Dakota	2.11	2.45	2.75	3.08	3.37	3.67	2.51	2.46	2.71	1.94
Tennessee	1.70	1.76	2.55	3.00	2.50	3.50	2.48	1.78	1.31	1.44
Texas	1.23	1.57	1.87	2.17	2.36	2.45	2.33	1.65	1.47	1.51
Utah	0.72	1.12	1.10	3.06	3.40	4.08	3.52	2.90	1.88	1.72
Virginia	1.68	2.85	2.15	3.69	3.30	3.00	3.02	2.45	2.08	2.23
West Virginia	1.05	3.00	3.00	3.20	3.10	3.45	3.85	3.90	3.85	3.05
Wyoming	1.13	1.92	2.77	3.22	3.18	3.32	3.01	2.52	1.76	1.41
TOTAL U.S.	1.18	1.59	1.98	2.46	2.59	2.66	2.51	1.94	1.67	1.71

Source: Energy Information Administration
* Estimated by IPAA

Note: All 1988 prices are estimated by IPAA

Miscellaneous

World Crude Oil Reserves

(mill. bbls.)	United States	Canada	Latin America	Middle East	Africa	Asia Pacific	Western Europe	Communist Nations	Total World
1976	33,502	6,247	29,609	367,681	60,570	19,391	24,539	101,100	640,090
1977	31,780	5,971	40,270	366,166	59,200	19,749	26,863	98,000	645,805
1978	31,335	6,860	41,247	369,996	57,892	20,007	23,966	94,000	641,772
1979	29,810	6,800	56,473	361,947	57,072	19,355	23,476	90,000	642,175
1980	29,805	6,400	69,490	362,071	55,148	19,631	23,085	86,300	651,930
1981	29,426	7,300	84,982	362,840	56,172	19,151	24,635	85,845	670,350
1982	27,858	7,020	78,482	369,286	57,822	19,756	22,924	85,115	668,262
1983	27,735	6,730	81,676	370,101	56,907	18,969	23,020	84,600	669,738
1984	28,446	7,075	83,316	398,381	55,541	18,530	24,426	84,100	699,813
1985	28,416	6,500	84,242	398,036	56,734	18,856	26,413	81,370	700,567
1986	26,889	6,850	88,755	401,679	55,194	19,024	21,938	79,250	699,779
1987	27,256	6,825	114,321	564,680	55,250	19,354	22,448	79,200	889,334
1988	26,500*	6,786	121,951	571,519	56,964	21,367	18,557	83,800	907,444*

Sources: American Petroleum Institute,
Energy Information Administration, and
Oil and Gas Journal

Notes: Totals may not add due to rounding.
Data quoted as of December 31st.

* Preliminary estimate

Refiner Acquisition Cost of Crude Oil

(\$/bbl.)	Domestic	Imported	Composite
1968	3.21	2.90	3.17
1969	3.37	2.80	3.29
1970	3.46	2.96	3.40
1971	3.68	3.17	3.60
1972	3.67	3.22	3.58
1973	4.17	4.08	4.15
1974	7.18	12.52	9.07
1975	8.39	13.93	10.38
1976	8.84	13.48	10.89
1977	9.55	14.53	11.96
1978	10.61	14.57	12.46
1979	14.27	21.67	17.72
1980	24.23	33.89	28.07
1981	34.33	37.05	35.24
1982	31.22	33.55	31.87
1983	28.87	29.30	28.99
1984	28.53	28.88	28.63
1985	26.66	26.99	26.75
1986	14.82	14.00	14.55
1987	17.76	18.13	17.90
1988	14.76	14.64	14.71

Source: Energy Information Administration

Retail Gasoline Prices

(c/gal.)	Excluding Taxes	Taxes	Pump Price
1970	23.08	11.58	34.66
1971	23.88	10.94	34.82
1972	24.31	11.13	35.44
1973	26.93	11.20	38.13
1974	40.40	11.30	51.70
1975	45.67	11.31	56.98
1976	47.48	11.45	58.93
1977	50.82	11.52	62.34
1978	53.06	11.57	64.63
1979	73.38	11.71	85.09
1980	107.07	11.83	118.90
1981	119.91	13.01	132.92
1982	111.29	14.23	125.52
1983	102.69	19.19	121.88
1984	99.57	21.14	120.71
1985	93.91	21.86	115.77
1986	69.57	22.10	91.67
1987	72.12	23.28	95.40
1988	70.59	23.93	94.52

Source: Oil and Gas Journal

Note: Motor gasoline prices represent regular leaded prior to 1985, and regular unleaded thereafter.

Wholesale Prices—Total U.S.

	Motor Gasoline	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Average of Four Products		Crude Oil
	(c/gal.)				(c/gal.)	(\$/bbl.)	(\$/bbl.)
1935	5.42	4.10	3.26	1.74	3.93	1.65	0.97
1936	6.32	3.94	3.39	1.81	4.41	1.85	1.09
1937	6.68	4.81	3.96	2.08	4.80	2.02	1.17
1938	5.97	4.57	3.62	1.55	4.22	1.77	1.14
1939	5.79	4.16	3.34	1.50	4.06	1.71	1.04
1940	5.26	4.36	3.55	1.74	3.91	1.64	1.02
1941	6.05	4.40	3.67	2.05	4.41	1.85	1.14
1942	6.14	4.56	3.91	2.18	4.54	1.91	1.20
1943	6.32	4.72	4.09	2.34	4.71	1.98	1.20
1944	6.47	4.78	4.34	2.49	4.87	2.05	1.20
1945	6.48	5.18	5.33	2.60	4.93	2.07	1.20
1946	6.60	5.70	5.06	3.05	5.26	2.21	1.39
1947	8.57	7.28	6.51	4.31	6.92	2.91	1.93
1948	10.53	9.92	8.94	5.72	8.81	3.70	2.60
1949	10.71	9.11	7.72	3.31	7.96	3.34	2.54
1950	10.86	9.39	7.97	3.98	8.29	3.48	2.51
1951	11.40	9.85	8.50	4.42	8.79	3.69	2.53
1952	11.38	9.90	8.52	3.84	8.62	3.62	2.53
1953	12.01	10.23	8.83	3.73	8.96	3.76	2.68
1954	11.66	10.40	8.94	3.97	8.88	3.73	2.78
1955	11.62	10.53	9.08	4.53	9.06	3.81	2.77
1956	11.75	10.99	9.45	5.30	9.43	3.96	2.79
1957	12.34	11.54	10.05	6.15	10.10	4.24	3.09
1958	11.74	10.96	9.39	4.82	9.27	3.89	3.01
1959	11.64	11.26	9.31	4.79	9.22	3.87	2.90
1960	11.61	11.17	8.79	4.88	9.15	3.84	2.88
1961	11.62	11.49	9.10	4.85	9.21	3.87	2.89
1962	11.52	11.42	9.11	4.78	9.13	3.84	2.90
1963	11.35	11.51	9.18	4.61	9.01	3.79	2.89
1964	11.27	10.93	8.65	4.50	8.83	3.71	2.88
1965	11.52	11.28	9.04	4.81	9.12	3.83	2.86
1966	11.59	11.49	9.09	4.73	9.15	3.84	2.88
1967	11.84	11.96	9.71	4.53	9.33	3.92	2.92
1968	11.55	12.03	9.84	4.30	9.14	3.84	2.94
1969	11.80	11.98	10.06	4.20	9.27	3.89	3.09
1970	12.33	12.43	10.45	6.14	10.20	4.28	3.18
1971	12.70	12.90	10.75	7.76	10.94	4.59	3.39
1972	12.70	12.87	10.61	7.60	10.87	4.57	3.39
1973	14.72	14.08	12.61	8.45	12.49	5.25	3.89
1974	25.53	24.02	22.57	20.43	23.48	9.86	6.87
1975	30.27	27.41	26.09	22.03	27.03	11.35	7.67
1976	33.82	31.67	30.38	21.66	29.55	12.41	8.19
1977	36.99	35.81	24.41	25.87	33.21	13.95	8.57
1978	39.22	37.23	35.66	23.00	33.72	14.16	9.00
1979	56.84	56.60	54.47	33.63	49.50	20.79	12.64
1980	87.40	80.26	78.21	44.43	72.77	30.56	21.59
1981	101.63	101.03	97.20	61.17	88.75	37.28	31.77
1982	94.56	97.18	91.95	57.80	83.27	34.97	28.52
1983	86.97	85.12	80.05	57.30	76.94	32.31	26.19
1984	81.14	84.75	79.62	59.14	74.49	31.29	25.88
1985	81.11	81.69	76.66	56.41	73.06	30.69	24.09
1986	47.74	49.92	44.91	36.23	43.97	18.47	12.51
1987	53.22	56.75	52.25	45.36	50.89	21.37	15.40
1988	50.31	50.72	46.10	38.72	46.22	19.41	12.57

Sources: Petroleum product prices from IPAA.
Crude oil wellhead prices from
Energy Information Administration data.

Notes: Data reflect price trends only, not actual sale prices.
Motor gasoline prices represent leaded fuel prior to
1982, and unleaded thereafter.

Wholesale Prices—East of California

	Motor Gasoline	Kerosene	Distillate Fuel Oil	Residual Fuel Oil	Average of Four Products		Crude Oil
	(c/gal.)				(c/gal.)	(\$/bbl.)	(\$/bbl.)
1935	5.45	4.12	3.37	1.79	3.97	1.67	1.00
1936	6.12	4.01	3.52	1.86	4.35	1.83	1.11
1937	6.23	4.76	4.07	2.19	4.62	1.94	1.21
1938	5.45	4.39	3.78	1.62	4.00	1.68	1.17
1939	5.29	3.99	3.55	1.57	3.85	1.62	1.04
1940	4.96	4.33	3.80	1.90	3.84	1.61	1.04
1941	5.97	4.38	3.90	2.19	4.45	1.87	1.17
1942	6.28	4.57	4.17	2.26	4.67	1.96	1.23
1943	6.41	4.69	4.19	2.31	4.76	2.00	1.23
1944	6.42	4.73	4.17	2.46	4.81	2.02	1.23
1945	6.36	4.72	4.16	2.59	4.81	2.02	1.23
1946	6.40	5.38	4.84	3.08	5.12	2.15	1.43
1947	8.45	7.14	6.44	4.48	6.89	2.89	1.97
1948	10.21	9.62	8.94	5.90	8.70	3.65	2.63
1949	10.39	8.36	7.34	3.10	7.64	3.21	2.60
1950	10.77	8.76	7.79	4.10	8.22	3.45	2.59
1951	11.26	9.31	8.43	4.47	8.70	3.65	2.58
1952	11.25	9.38	8.40	3.76	8.48	3.56	2.58
1953	11.79	9.40	8.45	3.59	8.71	3.66	2.71
1954	11.43	9.55	8.71	3.92	8.68	3.64	2.82
1955	11.42	9.76	9.02	4.66	8.95	3.76	2.81
1956	11.55	10.26	9.48	5.34	9.31	3.91	2.82
1957	12.06	10.64	9.95	6.03	9.86	4.14	3.09
1958	11.61	9.87	9.12	4.56	9.03	3.79	3.03
1959	11.57	10.14	9.36	4.70	9.11	3.83	2.95
1960	11.69	10.01	8.93	4.86	9.14	3.84	2.94
1961	11.72	10.41	9.31	4.82	9.22	3.87	2.95
1962	11.55	10.34	9.27	4.67	9.08	3.82	2.96
1963	11.33	10.44	9.32	4.57	8.96	3.76	2.95
1964	11.29	9.71	8.62	4.56	8.79	3.69	2.93
1965	11.56	10.15	9.00	4.82	9.08	3.81	2.93
1966	11.55	10.41	9.13	4.72	9.08	3.81	2.95
1967	11.76	11.00	9.74	4.55	9.26	3.89	3.00
1968	11.50	11.09	9.81	4.33	9.08	3.81	3.02
1969	11.82	11.03	9.89	4.34	9.25	3.88	3.18
1970	12.57	11.59	10.32	6.35	10.32	4.33	3.26
1971	12.81	12.18	10.66	7.55	10.88	4.57	3.47
1972	12.75	12.14	10.58	7.36	10.78	4.53	3.47
1973	14.83	13.64	12.47	8.48	12.51	5.25	3.99
1974	25.10	24.00	22.20	21.62	23.57	9.90	7.10
1975	30.23	27.61	25.98	23.06	27.31	11.47	7.93
1976	33.71	31.42	29.80	22.24	29.57	12.42	8.50
1977	36.83	36.33	34.57	25.99	33.21	13.95	8.83
1978	38.78	38.00	36.04	23.46	33.73	14.17	9.80
1979	56.29	56.51	53.96	32.63	48.85	20.52	13.20
1980	87.04	80.66	78.12	44.34	72.57	30.48	22.67
1981	101.56	102.36	98.75	61.84	89.26	37.49	34.92
1982	94.41	99.03	92.51	57.30	83.20	34.94	31.72
1983	87.64	87.03	80.77	56.36	77.19	32.42	29.34
1984	81.10	87.29	80.78	58.20	74.49	31.29	28.95
1985	80.87	82.82	76.53	54.73	72.48	30.44	26.59
1986	46.58	51.07	44.80	36.56	43.53	18.28	14.66
1987	52.73	57.76	52.13	45.96	50.86	21.36	17.45
1988	49.69	51.67	45.89	38.18	45.76	19.22	14.58

Sources: Petroleum product prices from IPAA.
Crude oil wellhead prices derived from
Energy Information Administration data.

Notes: Data reflect price trends only, not actual sale prices.
Motor gasoline prices represent leaded fuel prior to
1982, and unleaded thereafter.

Miscellaneous

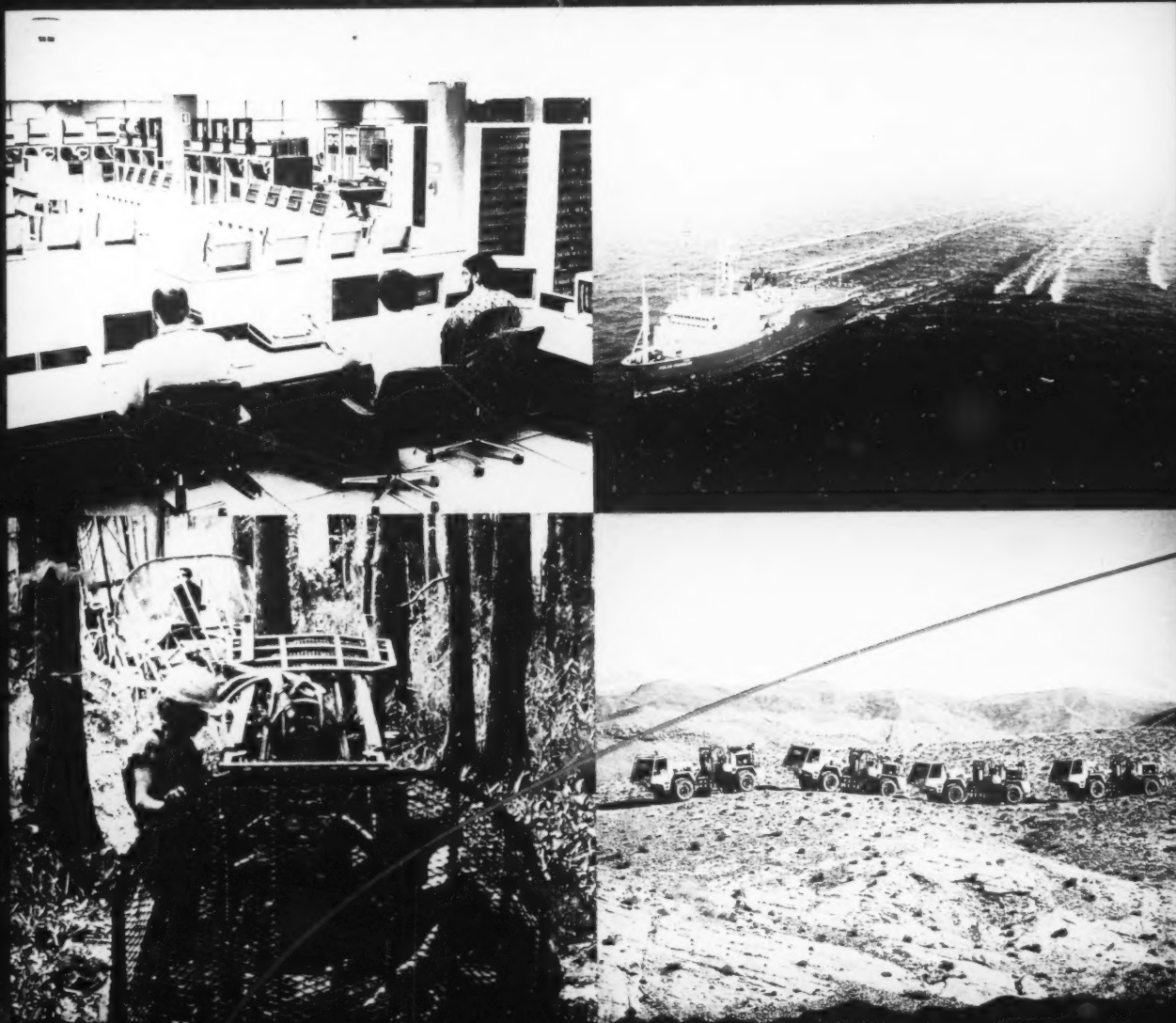
Industry Employment—1988

	MINING Oil and Gas Extraction	REFINING Petroleum Refining	TRANSPORTATION Oils and Greases	Pipelines, Except Gas	Gas Dis- tribution	WHOLESALE Petroleum Products	RETAIL Gasoline Stations	TOTAL INDUSTRY
Alabama	1,489	402	115	85	3,197	5,483	8,224	18,995
Alaska	8,620	94	0	930	225	566	1,036	11,471
Arizona	126	14	9	120	1,841	1,391	8,881	12,382
Arkansas	2,598	N/A	NA	N/A	2,185	2,805	5,549	13,137
California	33,208	24,820	878	961	11,120	14,651	62,828	148,466
Colorado	14,020	581	52	73	1,981	2,246	8,552	27,505
Connecticut	131	N/A	65	N/A	1,337	1,748	9,162	12,443
Delaware	11	797	10	4	311	267	1,504	2,904
Dist. of Columbia	59	54	0	0	632	160	865	1,770
Florida	692	37	247	64	2,187	6,809	30,006	40,042
Georgia	69	N/A	148	464	4,355	6,196	17,578	28,810
Hawaii	N/A	443	0	0	350	622	3,547	4,962
Idaho	36	0	0	16	327	1,414	3,171	4,964
Illinois	3,785	8,275	1,291	921	7,819	10,059	27,022	59,172
Indiana	535	2,292	325	396	2,884	3,314	18,173	27,919
Iowa	15	1	55	150	1,094	3,220	13,193	17,728
Kansas	9,027	2,059	370	1,863	2,783	2,444	9,350	27,896
Kentucky	2,149	3,735	135	139	3,525	3,072	10,706	23,461
Louisiana	54,000	10,300	600	1,100	6,000	5,000	7,200	84,200
Maine	N/A	0	0	N/A	N/A	1,368	3,559	4,927
Maryland	32	27	353	0	1,132	2,775	13,683	18,002
Massachusetts	54	N/A	409	N/A	5,116	2,643	15,908	24,130
Michigan	4,534	1,754	793	281	6,572	6,531	24,110	44,575
Minnesota	164	N/A	167	207	2,192	2,842	17,249	22,821
Mississippi	5,655	1,606	133	228	2,151	3,053	6,186	19,012
Missouri	78	N/A	374	223	4,461	6,396	19,886	31,418
Montana	1,938	766	0	76	279	1,269	3,218	7,546
Nebraska	595	N/A	N/A	98	1,719	2,282	6,900	11,594
Nevada	243	23	0	23	778	464	4,104	5,635
New Hampshire	0	0	1	3	268	462	2,916	3,650
New Jersey	88	6,350	811	153	2,352	3,941	18,554	32,249
New Mexico	9,200	642	34	354	2,903	2,323	4,364	19,820
New York	1,729	5,425	410	126	8,651	6,631	27,466	50,439
North Carolina	20	0	246	114	2,753	6,053	11,829	21,015
North Dakota	2,747	220	133	154	1,026	2,185	2,346	8,811
Ohio	6,498	5,631	836	693	7,424	6,837	31,874	59,793
Oklahoma	42,251	6,533	415	1,341	5,278	4,688	7,647	68,153
Oregon	64	88	N/A	20	N/A	2,638	9,148	11,958
Pennsylvania	3,800	8,200	800	700	8,300	10,100	27,700	59,600
Rhode Island	6	N/A	N/A	N/A	934	453	2,436	3,829
South Carolina	26	N/A	N/A	N/A	563	3,953	7,950	12,492
South Dakota	111	0	0	66	128	1,574	2,709	4,588
Tennessee	332	373	73	41	1,808	5,420	11,616	19,663
Texas	174,959	26,245	1,159	4,888	27,428	22,765	33,702	291,146
Utah	2,023	788	24	77	2,279	1,125	5,562	11,878
Vermont	N/A	N/A	N/A	N/A	106	434	2,223	2,763
Virginia	301	257	65	78	3,036	8,417	15,598	27,752
Washington	204	1,617	N/A	85	N/A	2,702	10,686	15,294
West Virginia	4,336	403	181	92	4,836	1,431	5,052	16,331
Wisconsin	N/A	N/A	55	180	2,745	3,719	17,044	23,743
Wyoming	9,191	918	11	238	1,040	995	3,027	15,420
TOTAL U.S.	401,749	121,770	11,783	17,825	160,391	201,957	622,799	1,538,274

Source: Various government agencies

Note: Data differ from the Bureau of Labor Statistics national averages due to confidentiality rules.

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Severance and Production Taxes

(thous. \$)	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Alabama	17,310	30,019	55,757	58,036	72,486	114,302	84,215	64,863	41,592	47,965
Alaska	173,800	506,500	1,170,200	1,581,700	1,493,700	1,393,100	1,389,400	1,108,400	648,500	815,810
Arkansas	11,261	17,858	27,047	24,602	22,812	21,329	20,438	10,312	9,726	8,542
California	9,103	9,025	10,249	11,840	14,196	17,018	15,146	14,022	14,600	15,000
Colorado	7,089	9,533	18,011	35,867	23,251	20,598	18,480	18,378	17,468	18,034
Florida	49,306	57,317	95,240	79,387	50,835	28,837	21,629	17,436	9,601	9,112
Indiana	1,159	1,756	1,835	1,764	1,578	1,546	1,398	686	867	726
Kansas	61,525	95,921	104,913	118,304	182,119	243,011	241,700	170,283	159,942	172,185
Kentucky	404	876	12,544	13,737	14,283	13,461	23,735	12,507	9,727	14,960
Louisiana	458,009	513,151	803,147	971,677	859,930	803,183	731,760	653,594	439,237	462,703
Maryland	6	4	3	2	1	3	1	1	2	2
Michigan	15,454	48,936	85,554	87,867	83,188	82,556	81,704	64,766	48,250	41,826
Mississippi	34,974	69,011	108,145	113,669	99,159	96,888	82,382	49,355	49,774	44,322
Montana	37,187	35,697	54,710	100,811	119,683	134,862	132,360	116,054	84,054	17,976
Nebraska	2,018	3,655	4,776	5,969	4,325	5,128	4,455	2,717	2,625	2,289
Nevada	N/A	N/A	4	3	25	98	152	134	160	180
New Mexico	185,349	287,152	369,331	348,437	347,548	381,537	365,029	234,000	262,290	238,541
North Dakota	15,094	53,593	91,210	126,138	166,700	160,436	136,200	81,775	90,665	72,215
Ohio	1,431	1,579	1,731	1,333	1,856	4,396	5,752	6,045	5,316	5,148
Oklahoma	283,791	437,306	601,846	744,629	778,169	709,917	709,364	571,965	372,883	392,637
Oregon	0	0	0	427	416	318	429	241	121	139
South Dakota	456	764	1,270	1,707	1,707	1,557	1,824	1,821	979	1,243
Tennessee	116	378	530	931	1,398	1,201	980	476	398	343
Texas	1,026,169	1,527,867	2,204,602	2,373,846	2,251,314	2,215,647	2,163,018	1,547,926	1,178,052	1,055,563
Utah	6,978	10,584	16,041	22,296	26,021	38,443	49,354	46,110	22,781	30,981
West Virginia	12,002	21,852	28,591	37,609	36,590	44,125	50,777	55,331	40,133	29,553
Wyoming	53,392	67,302	260,698	270,372	255,798	270,180	244,316	137,999	138,915	133,836
TOTAL U.S.	2,463,383	3,807,636	6,127,985	7,132,960	6,909,088	6,803,677	6,575,998	4,987,197	3,648,658	3,616,831

Source: Various state and industry contacts

*California data estimated by IPAA, represents property taxes applied to minerals.

Notes: Figures include all state and local tax revenues associated with the severance of oil and gas from the lease.
States vary on the use of fiscal or calendar year data.

Product Consumption — 1988

(thous. bbls.)	Motor Gasoline	Aviation Fuels	Middle Distillates	Residual Fuel Oil	Asphalt	Propane	All Other	Total Products
Alabama	50,517	2,748	21,817	2,730	5,253	3,761	12,722	99,548
Alaska	5,533	15,965	8,780	6,059	702	186	5,454	42,679
Arizona	39,472	6,352	9,198	10	2,698	1,136	8,625	67,491
Arkansas	29,183	946	12,807	53	1,381	3,461	7,008	54,839
California	320,654	77,640	85,521	52,458	15,428	11,118	82,463	645,282
Colorado	36,582	5,910	10,104	238	3,572	3,016	8,706	68,128
Connecticut	31,901	1,771	16,389	28,162	1,864	1,144	11,902	93,133
Delaware	8,414	192	7,171	2,468	540	1,745	3,008	23,538
Dist. of Columbia	4,334	0	3,993	46	800	43	1,350	10,566
Florida	145,362	24,567	34,301	35,563	9,563	7,783	37,676	294,815
Georgia	81,303	17,481	25,745	2,471	7,296	6,147	20,577	161,020
Hawaii	8,226	9,672	3,397	15,242	353	357	5,457	42,704
Idaho	10,743	406	5,240	29	404	523	2,541	19,886
Illinois	103,103	3,172	28,986	2,437	5,635	10,091	22,479	175,903
Indiana	62,287	15,714	30,504	1,849	6,980	6,022	18,074	141,430
Iowa	32,218	660	17,073	26	2,226	5,512	8,456	66,171
Kansas	39,740	3,559	17,831	854	4,402	18,697	12,466	97,549
Kentucky	44,035	4,404	20,311	412	2,631	3,223	10,991	86,007
Louisiana	57,912	26,531	45,292	35,196	2,411	11,141	26,151	204,634
Maine	15,528	850	10,189	12,300	1,840	386	6,021	47,114
Maryland	45,440	2,963	20,519	9,197	4,709	1,364	12,336	96,528
Massachusetts	60,595	9,243	40,283	38,869	1,773	1,611	22,326	174,700
Michigan	102,715	6,860	25,758	1,579	3,839	10,137	22,108	172,996
Minnesota	48,215	4,666	18,810	1,229	4,925	6,184	12,312	96,341
Mississippi	36,433	7,260	20,917	309	2,641	8,975	11,214	87,749
Missouri	60,936	7,209	18,151	912	5,688	7,509	14,711	115,116
Montana	11,163	836	5,781	182	1,910	1,315	3,104	24,291
Nebraska	18,461	632	12,988	74	1,269	3,247	5,373	42,044
Nevada	14,626	4,860	6,596	119	936	816	4,096	32,049
New Hampshire	7,712	208	8,286	1,994	432	1,167	2,901	22,700
New Jersey	108,616	35,634	76,089	38,237	5,344	2,622	39,053	305,595
New Mexico	18,822	1,453	9,070	193	2,124	5,045	5,378	42,085
New York	125,255	3,700	65,535	60,059	9,250	4,887	39,367	308,053
North Carolina	80,284	5,505	32,489	6,696	5,437	7,399	20,192	158,002
North Dakota	7,989	676	6,535	190	1,188	2,654	2,818	22,050
Ohio	119,486	15,265	42,608	2,144	8,994	6,284	28,539	223,320
Oklahoma	50,874	7,922	18,138	1,233	3,584	6,430	12,920	101,101
Oregon	31,877	2,749	16,562	3,230	2,437	1,181	8,503	66,539
Pennsylvania	120,318	11,343	63,338	23,592	7,149	6,443	34,019	266,202
Rhode Island	12,947	602	9,069	2,234	2,144	410	4,015	31,421
South Carolina	39,595	1,052	13,492	3,613	3,882	3,052	9,478	74,164
South Dakota	8,824	1,132	5,756	2	883	1,253	2,615	20,465
Tennessee	67,991	3,718	28,349	442	5,468	2,834	15,941	124,743
Texas	311,108	97,101	144,562	45,710	14,514	80,756	101,647	795,398
Utah	19,469	4,953	7,854	451	1,075	1,330	5,147	40,279
Vermont	4,251	90	2,530	232	510	526	1,193	9,332
Virginia	71,992	11,428	35,332	8,301	4,653	2,874	19,718	154,298
Washington	53,931	18,018	24,286	13,573	1,932	2,382	16,721	130,843
West Virginia	15,054	494	6,945	350	884	298	3,520	27,545
Wisconsin	49,074	1,025	22,650	455	3,435	4,934	11,952	93,525
Wyoming	7,183	290	8,553	512	1,052	3,158	3,040	23,788
TOTAL U.S.	2,858,282	487,426	1,232,476	464,516	190,040	284,567	808,385	6,325,692

Sources: Energy Information Administration (preliminary data) and The Asphalt Institute

Notes: Middle distillates include kerosene.
All other includes naphtha, lubricants,
waxes, petroleum coke and still gas.

Data Sources

The format of the individual state pages was changed beginning with the 1984 edition. So data in current issues may be compared to the previous format, the listing below shows the item number used for each category prior to 1984. The editor gratefully acknowledges the following sources.

(1)	Number of counties	<i>The World Almanac</i>
(15-16, 18-19)	First and peak production years	<i>AIME Statistical Yearbook, World Oil, Oil & Gas Journal, & World Petroleum Report</i>
(28-29)	Deepest wells drilled	<i>World Oil</i>
(31)	Cumulative wells drilled	<i>Oil & Gas Journal, World Petroleum Statistical Yearbook, International Oil Scouts Association, Petroleum Information, & API</i>
(7)	Cumulative wellhead value	IPAA
(26)	Cumulative production and reserves	API, American Gas Association, and EIA
(8-11)	Wellhead prices and value	EIA
(new)	End-use natural gas prices	EIA
(new)	Severance and production taxes	IPAA survey
(30)	Wells and footage drilled	API
(17)	Seismic crews working	Society of Exploration Geophysicists
(27)	Rotary drilling rigs	Baker Hughes, Inc.
(21,23)	Producing wells	<i>World Oil</i>
(24)	Oil and gas production	EIA
(14)	Number of employees	IPAA survey
(25)	Petroleum reserve position	EIA
(new)	Drilling costs	<i>Joint Association Survey on Drilling Costs</i>
(20)	Stripper wells	Interstate Oil Compact Commission and National Stripper Well Association
(12-13)	Rank among principal minerals	Based on data from Department of Interior and EIA



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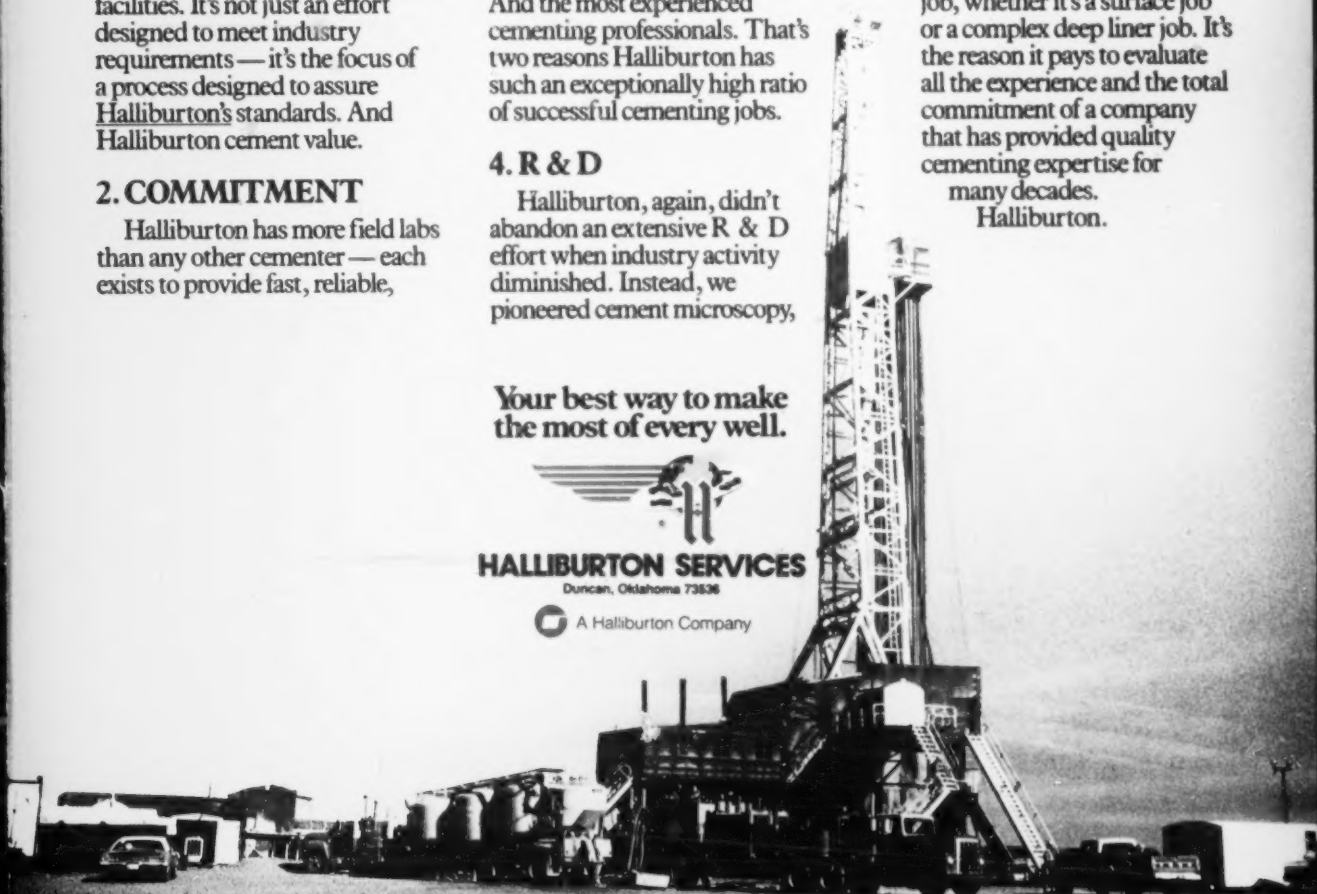


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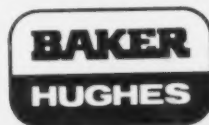
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